

REMOTE STORAGE JITTERS



BEST OF EXECUTIVE FD

RSA ENCRYPTION PATENT RELEASED

Algorithm can now be used free of charge

BY ANN HARRISON

RSA Security Inc. pre-emp a number of celebration parties by unexpectedly releasing the widely used RSA publickey encryption algorithm into the public domain ahead of this week's expiration of the

natent on the algorithm The move, like the patent expiration, will allow security vendors and others to use the algorithm at no charge, without a license from RSA Security. Analysts said this will result in more secure applications,

especially among smaller firm that couldn't afford the fees. In fact, one of RSA's biggest

competitors, Baltimore Techogies PLC in Dublin, said it will now give away a renackaged version of its developer Encryption, page 16 USERS PERTURBED BY ORACLE PRICES

New capacity-based model for 8i database can be costlier; company stands its ground

A new pricing scheme that Oracle Corp. boped would make

its database pricing simpler and more predictable is costmoney and causing at least a few to look to competitors such as IBM and Microsoft Corp.

In interviews with Computerworld, more than a halfdozen users and potential users of the Oracle8i database complained about the capacity-based pricing, which was ced last year and went

into effect across the board in the last quarter. "Their licensing recently has

Prevo, vice president and CIO at Green Mountain Coffee Rossters Inc. in Waterbury, Vt., a few weeks after reaching a licensing deal for a hefty Inter-

Oracle's & pricing is based on a measure it calls the universal power unit. The UPU is calculated by multiplying the number of processors by the processor speed. That number is then multiplied by the price

Oracle, page 14

net server

POLICING PRIVACY GOES HIGH-PROFILE

Expedia vows no data sharing without consent

Online travel-service provider Expedia Inc. has grown sigantly this year through the absorption of smaller Web sites and has raised its profile by developing a new air-

fare search engine. But the company today is unveiling a new privacy policy it said will have just as dramatic an effect on its bottom line. Aiming to stave off government intervention, the Belle-

vue, Wash-based spin-off of Expedia, page 93 Chief privacy officers enter executive suite BY PATRICK TO Ronald Hoffman, the pri sues manager at Mutual of Omaha Insurance Co., is at the forefront of a new breed of company offi-

cials who are working with CIOs to set corporate data-privacy policies. Hoffman is responsible for belping to establish privacy practices at the Omaha-based insurer. It's part of an overall corporate strategy in response to new privacy regulations and CPOs, page 93

ISPANICS ARE THE FASTEST-GROWING SEGMENT OF THE U.S. population, but you'd never know that by their underrepresentation in the IT workforce. Yet tapping this labor pool could go a long way toward reducing the IT worker shortage - without going offshore. Mark Hall reports that the solution involves targeted recruitment of Latino college students and mentoring programs on the job.

Story begins on page 52.

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LOOSENING THE BELT

bots dresses for success, maka record investment in IT as it is to feture resitts. Page 42

COMPUTERWORLDTHIS WEEK

SEPTEMBER 18, 2000

NEWS

4

- PORSCHE BUILDS a Web front end for legacy parts and inventory apps, overcoming latency problems in the process.
- 6 AUTO EXCHANGE passes an FTC investigation into antitrust concerns but faces integration and organizational problems.
- 8 BANKS LAUNCH a joint financial information site for
- financial information site for major customers.

 8. MONSTER COM STARTS
- a recruiting service for execs earning \$150k and more.

 10 PRIVACY ADVOCATES criticize Microsoft for "persistence" features in its browser.
- the company promises privacy enhancements.

 12 VIRGIN DEBUTS branded cellolar service, leasing capac-
- cellolar service, leasing capacity in the U.S. to link with wireless nets in the U.K., Singapore.

14 NORDSTROM CIO FALLS victim to exec purge as retailer tries to re-energize business and advance replenishment and inventory management systems.

16 HUMAN ERROR OPENS the door to a cracker at Western Union's site, 16,000 creditcard numbers are threatened and the site gets refortified.

M n n e
Editorial/Letters. 32, 33
How to Contact CW 92
Shark Tank 94
Sock Ticker 91
Company Index 92

BUSINESS

38 J. L. HAMMETT transforms itself from a traditional school supplies shop to a fast-moving

- 40 BANK OFFERS service that
- aggregates customers' multiple accounts on one site. WORKSIVLES
 - job destination for armchair quarterbacks worldwide, but it's not all fun and games.
- it's not all fun and games.

 52 LATINOS ARE underrepresented in information technology despite the growing
- number of them in the U.S. and the demand for IT workers.

 54 CIOs MOVE into the spotlight as IT gains clout. Prudential's CIO, William D. Friet, nifees
- tips on dealing with the media.

 QUICKSTUDY

 56 ONLINE PROFILING raises controversy over the balance
 - 6 ONLINE PROFILING raises controversy over the balance between gaining valuable data about customers and invasion of privacy.

OPINIONS

- 32 MARK HALL says investing in the right kind of IT system a few years ago could have helped
- Ford and Bridgestone/Firestone avoid their tire problems.

 32 DON TAPSCOTT says IT or-
- DON TAPSCOTT says IT organizations should forget about the skeptics and embrace the Wireless Application Protocol.

TECHNOLOGY @ ONLIN

- 60 SUN RELEASES its latest microprocessor, the Ultra-SPARC Be, designed for storage systems and other highend applications.
- 62 JUDE THADDEUS finds new respect for the desktop support staff after trying to work with a major client who insists on using PGP encoration.
- 64 DIGITAL WALLETS provide 6GB of plug-and-play external storage that also reads compact flash cards from digital cam-
- eras and MP3 players.

 72 STORAGE OPTIONS
 abound, but many top compunies are reluctant to give up
 control of their key data.
- 74 AN EASTER EGG is a graphic nr sound effect produced by a program that's meant either as a joke or to display program credits. Find out more in this

week's primer.

33 JOHN GANTZ asks: Is your

34 ALEX TORRALBAS SAYS

34 WILLIAM M. ULRICH

company making plans to cap-

operating system developers should take the lead in security

writes that if you're shopping

one with the help of the com

for an ASP consider form

nst viruses and worms

ture more online business from

- vacy policy really means, www. computerworld.com/commerce On our new Sun Spotlight page. fo law the latest may about the rea-
- F-Commerce Community columnist

 Jim Storne explains what Amazoncom's new privacy policy really
 means, www.
- On our new Sam Spotlight page: follow the latest news about the external memory cache problems affecting some Sam Ultra Enterprise Units servers, and view comments from other readers about the problems and the compuny's efforts in keep dissatisfied customers quiet: www.computerworld.com/sam
- Also in our E-Commerce Community, Peter Swire, the Clinton administration's chief counselor for privacy, rebuts criticism leveled against federal government Web sites by congressmen Dick Armey (R-Teuse) and W. J. "Billy". Tourin (R-La.).
- www.computerworld.com/ ecommerce
- petitors in your industry.

 44 ED YOURDON says IT organizations involved in electronic-business projects need to
- investigate "light" project management methodologies. 94 FRANK HAYES says Western Union learned from expe-
- era Union learned from expe rience that when crackers attack, the best-laid recovery plans depend on what business partners want.

SAS Shuffles Execs in Preparation for IPO

stitute inc. in Cary, N.C., so

has signed up with Capters Pale Alto, Calif., to use the

and 24/7 MEDIA INC., bot n Now York. . . . Troy, M

Literion markets. The technologies included make the server ideal for tasks

Porsche Fixes Satellite **Net Latency Problem**

Acceleration software cuts lag time to 3.5 sec.

The signal from the user's HEN A USET at a Porsche car dealership hits a computer key to check on parts availability, he has to wait a good 10 seconds for anything to happen. That

ships in North America want to achieve. The problem is latency associated with Poesche Cars North America Inc.'s satellite network system, and the Atlantabased company has been tinkering under the bood to fine-tune it. Last work. Poesche confirmed that it has

found a fix: Web front-end and net-

work-acceleration

Pursche's 200 dealer

keystroke currently travels from the dealership's satellite dish to a satelline 22,000 miles above and then back down to the Porsche satellite buh in Detects where it's transmitted ower a serrestrial cable to the automobile company's data isn't the sort of speed record center in New Jersey.

gets back to the dealership, it has truveled 90,000 miles, said John Jacobs, manager of dealer and field systems at Porsche. The resulting delay of 10 to

unacceptable," lacobs said. **Looking Forward**

tem availability, be said.

ates Inc. in Port Chester, N.Y.

HP will also offer a utility

like pricing model under

which users pay for the system

hased on their actual useer of

Instead of paying for the en-tire system up front, users will

be able to install a fully config-

A similar but separate program will allow users to buy

fully configured Superdome

servers but pay only for the

processors and associated soft-

on and off as needed.

the box

Ted Larson, a ports assistant at Napleton Porsche in Westmont. Ill., said he has experienced delays and is eager for Porsche to roll out next several weeks.

> away from a green screen to a Weblike Interface, Jacobs ceived he said said, the implementation will cut network latency by twothirds, reducing response time via the

satellite link to 3.5 seconds. Porsche is using network-acceleration software called Venturi from Fourelle Systems

Inc. in Santa Clara, Calif., to help speed response times. Venturi has both server and

client components. In Porsche's case, the client runs on dealerships' PCs and the server software runs on a dedicated dual-Pentium PC boused at the company's data center. The Web-hosting and acceleration servers connect to an IBM AS/ADD back and which is also

In addition to cachine and 12 seconds "is commercially compressing data to belp minimize latency, Jacobs said, Ven turi spoofs, or fools, the satellite network link into thinking it's streaming the data instead of sending it in packets. Ordi narily, the client PC would in termittently acknowledge to the server that individual data the system in the packets making up files have been received. Porsche's im-Besides moving plementation doesn't acknowledge receipt until all the requested data has been re-

> lacobs said the Venturi implementation will cost Porsche slightly less than \$100,000.

Decreasing latency over satellite links and other wireless links is an ongoing challenge, said Roberta Wiggins, an analyst at The Yankee Group in Boston, Users expect the same fast service they get on their wired networks, she noted.

used. Customers can activate

HP Server Offers Varied Pricing, Support

Analysts say new model may help firm close in on Sun's lead

Hewlett-Packard Co.'s new Superdome high-end Unix server, announced last week, is

aiming to be different from competing machines, not just on the technology front had also in the way it's priced and supported, according to users and analysts

The 64-processor Superdome system is scheduled to ship in the first quarter next year. The product is targeting the database server, application hosting and server consol-

Superdome (see chart) like application consolidation, ment that supports it has to ware that are actually being

said Tim Lindler, vice president of information technoloey operations at First Union Corp. in Charlotte, N.C.

As a corporation, we are looking for ways to reduce IT costs "Lindler said Instead of buying new servers for every new application, the bank will be able to consolidate them into a single, large Superdome server going forward, be said.

Key Differentiators Superdome's scalability and

hot-swappable components also make it a reliable server for large applications, said Bill Mansfield, a director at Telcordia Technologies Inc. a a Piscatagors, N.L-based provider of software for telecommunications companies.

"Telecommunications is an always-on industry," Mansfield said. The computing environ-

additional processors when needed and pay for only that The product should help HP [meet] very high requirements" when it comes to sysclose in on Sun Microsystems

Inc.'s lead in the high-end Unix server space, said Jean Bozman, But what will really set Superdome apart from its rivals is an analyst at International Data how HP said it plans to sell and Corp. in Mountain View. Calif. support the system: with indi-Other products, such as Sun's vidual managers for each cus-tomer, said Rich Partridge, an Ultra Enterprise 10000 servers and IBM's S80 boxes, offer simanalyst at D. H. Brown Associitar features, said Mansfield.

JUST THE FACTS Superdome Unix Server

a Support for up to 64 PA-8600 proces-sors with 1.5MB on-oble cardworr chic e Up to 12858 of memory

Hardware and software partition

 Future support for intel's U-64 chaps and for multiple operating systems, including ing HP-UX fb, Windows NT and Linux CPU memory 10 backgione 10 cards





FASTER DATA WAREHOUSING

Got mountains of data in a dozen different formats that you need to select, reformat, aggregate, and sort? SyncSort™ is optimized to do the job - fast. Use it with more specialized warehousing tools to slash your processing time. To arrange a free trial or for a free copy of our booklet, "Six Data Warehouse Tasks Made Easier with Syncsort," visit us at www.syncsort.com/90cws.

Big Three Clear Major Hurdle With FTC

Analysts say regulatory inquiries and integration strategies remain an issue

FTER TWO rounds of inquiries by the U.S. Federal Trade Commission (FTC), the Big Three's online auto industry exchange last week won tentative approval to open its virtual doors. Gaining that green light will allow the South field. Mich., exchange, called Covisint, to seek a permanent location, hire a CEO and gene up to launch by year's end.

However, analysts noted, the start-up must still tackle infrastructure integration issues with participating suppliers and additional regulatory con-

The FTC's investigation focused on antitrust concerns and the underlying technology infrastructure that Covisint plans to implement. The probe is being closed for now, but the ssion noted that it could

open the matter in the future. FTC Chairman Robert Pitofsky said in a statement that Coisint is in such an early stage of development that FTC members "cannot say [the] venture will not cause competitive concerns." If it appears to do so, the ETC will reopen the case.

General Motors Corp., Ford Motor Co. and DaimlerChrysler AG have invested \$200 million in Covisint since its launch in February. Renault SA and Nissan Motor Co. have signed on to join the exchange as gonowner participants. Together, the five automakers could potentially process up to

ment transaction costs are anti-

es of items such as office supplies and engine parts through Dun Garretson, an analyst at Forrester Research Inc. in Cambridge, Mass, said the FTC's approval should eliminate mounting concerns that online industry exchanges aimed at trimming procure-

"This was the first and biggest exchange to get FTC approval," said Garretson. "But the FTC found that Covisint was about efficiency and not about collusion." Covisint still needs to devise

an interim plan to assist suppliers as they transition from electronic data interchange (EDI) to Internet-based systems, Garretson said. According to a recent For-

rester survey of 30 large automotive suppliers, 74% of their sales were conducted using FDI 29% of sales were handle by other means such as by phone and less than 1% used Internet technologies, By 2004. those suppliers anticipate shift-ing to 68% of sales conducted over the Internet, 21% using EDI systems and the remai 11% handled off-line.

AT A OLANGE Covisint's Road Map

The Big Three's direction: · Gam approval from Bundeskurtelland

the Ferman Fortecti Cartel Office, which has launched an investigation into Course Court major automakers such as Toyota Motor Co and additional top ter suppliers Develop a regulation path for suppliers. with EDI based systems

In a separate development. Dearborn, Mich-based Visteon Corn. last week announced that it plans to participate in the Covisint exchange. Visteon is the world's second-largest automotive supplier, with a revenue of \$19.4 billion last year.

FTC Member: Panel Still Learning About Online Exchanges

Says B2Bs cover familiar ground for brick-and-mortars

BY CARGE SLIWS

U.S. Federal Trade Com sion (FTC) member Mozele W. on spoke earlier this month at the Net Returns conference organized here by The Industry Standard, one of Computerworld's sister publications. Following his speech, he

line business-to-business mar-

ketplaces and the FTC's ap-

neoach to monitoring them.

the B2B exchanges. I interesting ... is that (thei term covers a iot of things, a lot of which is not new at all. We've been involved with [regulating business-to-business relationships) for a long time, and spoke with Computerworld we have some rules about the issues raised by on-

online bu

ins? the Wild West about how businesses sh conduct themselves to avoid antitrust problems, including avoiding opportunities for col-

stitute for Quantum Informs tion to study the algorithms that process data by quantu physical processes. Caltech's program, if successful, would eventually make even the fastest silicon chin obsolete. The University of California at Berkeley and Mills College

in Oakland, Calif., will use the funds to collaborate and develon a prototype of error-sensing software that would automatically repair data. The grants total \$230 million, but much of that is for multiyear grants. The \$90 mil-

avoid problems. line will come the cours for this year. The NSF is asking Congress for \$190 million for more

n and price fixing and joint purchases that have a negative market effect. What we're doing now is spendi A: We're learning more about time with the folks who are involved in B2B ex stand a little bit about

what they're doing, but also to remind them and to get them to think a little bit more about some of those areas I inst talked shout

Q: in June, the FTC held

a two-day workshop on business-to-business exchanges. What did you take away from that event? A: I think they were among the most pornilar workshops we've ever had. There were 500 people [in attendance]. I also think that we learned a lot, and [the attendees) learned a lot. I ex pected to hear a lot more of the normal, hard-core tech responses: "Government should stay away. It shouldn't be inunlead " [But] I think that there are a lot of folks who actualls see some real value to government involvement in two ways: One is to legitimize the fact that some of these RZR market-

places can provide real value, and second is to give them some guidance as to how to Q: The FTC is now leve

A: I don't think I really can. But the one thing that I would tell people is that there are some very highly visible and large B2B exchanges that are sort of on the radar screen right now . We have found that this is not a one-size-fits-all proposition. So I would be very careful [about thinking] that whatever happens on any given [inves ention), especially early on, is indicative of how we're going to view everything in the B2B

O: Is there any mes to send to information tech staffers whose compani jumping into online o ing about it?

space.

or thinking about it?
A: I think they need to get good advice. One thing that I tell people is that in the online space, there's always a fair amount of hype involved [They should] begin to get away from the bype and ... tr to figure out what the real val ue proposition is to them of getting involved in a given

marketplace or an exchange. What I would also say - and maybe this is especially imp tant for companies [that] are moving from bricks to clicks [and] have maybe a little bit longer track record - is that it's not the Wild West out there. Just because it's online doesn't mean that it's that

NSF Awards \$90M in Grants

The National Science Foundatinn (NSE) last week announced \$90 million in information technology grants, intended to develop projects ranging from personal robotic istants to a program that will automatically renair conrues data.

The grant money, appro ated by Congress for the Ar-lington, Va-based foundation's ew Information Technology Research program, will fund studies at universities and privately funded consortiums to

New Economy, help more people become proficient in IT and develop assistive technology such as personal robots to assist the elderly and physicalby disabled, the foundation said. One of the largest awards is a \$7.2 million grant for Duke

University in Durham, N.C., to study bioinformatics. Duke will use IT to study how protein structure determines the structure of an enzyme.

One initiative at the California Institute of Technology in Pasadena will establish an Inever wonder how those who have all the answers?

outhwest Hits SIB

nger revenue from January or st. About 30% of Southwest's

FTC Postnones Decision on Internet

Oracle Doubles Profits

Oracle Corp. pasted record results for its first quarter of 2001, report-ing 3501 million in profits, compan ing 2501 million to proton, compared with 3257 million for the same peri-oil best year. Sales totaled 32.3 bil-lion, up from 32 billion for the came period a year age. The company will

Poll Exposes Online Shooping Fears

Top Banks Launch Joint Site for Corporate Clients

TheMarkets.com will debut later this year

EVEN OF the world's lesding investment banks last week announced plans to launch a joint financial information Web site for their institutional clients. The site TheMarkets com is expected to make it easier

for corporate customers such as Wal-Mart Stores Inc. to find equity research, market data and other investment information in one place. But customers won't be able to use the site to buy or sell stocks online. at least not initially, which more hinder customer adoption, analysts warned.

Big institutional investors. which typically have accounts with multiple investment banks, have grumbled about how they have had to jump around among different bank Web sites to locate and gather market information, said Don Callahan, a managing director at New York-based Morgan Stanley Dean Witter & Co., one

of the banks in the venture. Using The Markets com castomers should be able to get at this information more easily by going to a single, consoli red location, he added. The effort is akin to the kind of acgregation portal Citibank recently launched — MyCiti.com — that allows retail customers to view all their accounts from

a variety of U.S. financial institutions (see story, page 40). But unlike the MyCiti.com site, which is available to Citibank and non-Citibank customers alike. The Markets. com will be available only to institutional clients of the participating banks, such as pension funds, asset managers and

bedge funds. Multex.com Inc. in New York will provide the infrastructure for the site, which will link investors to Morran Stanley Dean Witter, Goldman Sachs Group Inc., Merrill Lynch & Co., Salomon Smith ney Holdings Inc., Credit

Suisse First Boston, Deutsche Banc Alex. Brown Inc. and UBS Warburg. The site is scheduled to launch in the fourthouarter

Still, the inability to trade on the site could deter costomers from using it, said Dana Stiffler, an analyst at Newton, Mass-based Meridien Research Inc. "Until there's some kind of transactional capabil ity. It's basically like putting a

catalog online," she said. Eventually, information-only sites and trading sites will converge, because it's logical for them to be linked and because customers will demand it, said Larry Tabb, an analyst at

Needham, Mass-based Tower-Group.

Accolumn to executive the participating investment banks, there will be no additional costs for clients to use

nder of basic equity and new-is

Third-party news and market data

Access to collaborative forums - Access to multimedia orea

Job Web Sites Target Execs had reservations about do

In just a week's time, Monstercom's new Web site that tarrets senior executives has drawn more than 2,000 job recruiting site of Clevelandbased Management Recruite candidates and several hundred postings. International Inc.

lored specifically for job seekers who earn at least \$250,000 annually and have a vice president's title or higher, was created because Monster's research indicated that senior executives wanted more information online about job opportunities, according to Linda Natansohn a Monster com senior vice president

But while the popularity of job busting on the Internet has led to a profusion of inb boards, many labor industry leaders are skeptical about whether companies will turn to the Internet to hire high-

More than two-thirds of 4,000 executives surveyed in April said their companies post job openings on the Internet. But about the same percentage said they wouldn't put

so, according to the survey by Brilliant People.com, the onli

Jim Jones, managing direct of The Information Manag ment Forum, an Atlanta-base association of business and information technology execu

poses too much risk of expo sure for senior workers, who typically don't like to advertise that they are job hunting.

Although Monster said can didates' identities aren't revealed on ChiefMonster - job seekers decide which openings they want to pursue - Jones said that in tight hiring circles, ome manueers may not less be able to identify job candidates, particularly if they post on multiple boards.

Some clients, such as Maggie Yunker, human resour ager at professional services firm Gobosh in San Jose, said they feel that they need a recruiter to sell the company to the candidate. Yunker said it's easier to make a package look attractive by using a live person

rather than the Internet. The "best candidates aren's surfing the Internet looking for job openings," says Tammy Anderson, managing partner at Atlanta-based Lysen Anderson Executive Search Inc. Passive iob seekers don't carry a lot of 'baggage' and can view a job opportunity more objectively because they're not looking to leave their present situations.



Microsoft Mulls Browser Changes on Privacy Front

@-Business World

ALL E-BUSINESS.

e-Businessworld.com. Updated hourly.

UNISYS

ALL THE TIME.

it makes everything else history.

@ Business World

Microsoft Corp. last week said it's looking at altering the next version of its In-

"persistence" feature, which lets Web sites gather some information about loernet Explorer browser to allow users | ternet usage and identify return visitors

ability to accept Internet cookies.

Rick Miller, a Microsoft spokesman said the feature was designed to let more information be stored at the user level so Web pages can be downloaded more quickly, especially on slower dial-

But he acknowledged that users who have already disabled Explorer's cookie canabilities may be uneasy about the information gathered by the browser via persissence, such as search queries users have run and Web pages they

To disable persistence now Explorer users have to turn off the browser's scripting features. But Miller said Microsoft is considering a plan to include a feature in Internet Explorer 60 the next scheduled release of the browser that would let users clear the cache of Web files in which information gathered via persistence is stored.

Richard Smith, chief technology officer at the Denver-based Privacy Foundation, noted that the persistence feature was introduced in Internet Explorer 5.0, which is now used by half the people who surf the Web. Microsoft this summer developed a

set of cookie management features for Internet Explorer 5.5 that can be downloaded from its Web site. Those features include a button that gives users the ability to delete all cookies and a pop-up box that notifies them when third-party mokies arrive on their system Privacy concerns about the persistence feature in Explorer were first raised by Guille Bisho, a Spanish information technology consultant, in a post-

ing sent last week to the Buggrag securi-

ty mailing list. Bisho said Microsoft

should provide more information about persistence to users and place an option to deactivate the feature near its browser's cookie controls.

Complying With Privacy Law Too **Pricey for Kid Site**

Children's Online Privacy Protection Act (COPPA) and a lack of advertising

dollars is forcing Zeeks.com Inc., a children's Web site in Portland, Ore., to shut down its chat rooms and e-mail service by the end of this month The law, which went into effect in April, requires Web sites that get traffic from children who are under 13 to post a privacy policy detailing the personal

formation required to register as a user of a size or data that children may reveal in chat rooms or on posting services Zeeks.com CEO Steven Bryan said the company is planning to add more online games to recapture the traffic -20% of the site's overall visitors - that

interactive features of the site. He said a lack of advertising dollars also contributed to Zeeks.com's decision.

the online movements of Web users and store information about them, but

the bugs are invisible to users. Cookies can be turned off or controlled through

a Web browser, but Keating said there

are no such management features for

Web bugs because they're embedded

within the HTML code oo a Web page.

That means they "can be much more insidious," he added.

ly identifiable information they collect from young visitors. That includes in-

will be lost by shutting down the e-mail and chat services. But Bryan, who said complying with COPPA would cost his company about \$200,000 per year, made it clear that the expenditure needed to do that wasn't the only reason for discontinuing the

Group Decries Use of 'Web Bugs'

Cites lack of user control

BY TOOO R. WEISE Companies and onli use information-gathering "Web bogs" on their Web sites should clearly disclose the presence of the technology to users, according to a Denver-based privacy group that proposed a set of stan-dards to address the issue last week. The proposal was detailed at the

Global Privacy Summit in Washin by the Privacy Foundation, which claimed that many Web sites are using Web bugs to track the activities of visitors without their knowledge. Users "doo't have much control over" Web bugs, said Stephen Keating, the foundation's executive director. Web bugs are similar to the Internet

The Privacy Foundation's proposal calls for standards under which Web bugs would be clearly shown as visible icons on a computer screen, rather than as small, dot-size images that are nearly sssible to see. The group also supports a requirement that the icons be clearly labeled with the names of the companies that have placed the Web





Banks to Release fisa Smart Cards

Co.'s Blue the only credit card with edded chip on the market.

about to change, as three - Providen Financial Corp. is n Francisco, resemblem real of Corp. in Boston and First USA of N.A. in Wilmington, Del. -we associated that they will seen saving Visa amort cards. Ac-g to bank officials, these cards wide greater security for on-

Struggling SCO Gets \$13.1M Cash Infusion

The Santa Cruz Operation Inc. (SCO), which has been buffeled by

ocently announced a 19% work-wor reduction, last week said it so received a cash infusion of 13.7 million. The Senta Cruz, Calif et facilitated by Security Research Associates Inc., a broker-age in Larksper, Calif., that plans to sell 3.3 rellion shares of SCO's

TLE COMPUTER INC. last wee and the public beta-test version lec OS X. It's available online for .96. . . . PCSUPPORT.COM INC. sentain View, Calif., said it will be MYHELPDESK COM INC. in ood, Mass., for 1.5 million ns of common stock. . . . Dig

media software companies LOUD-EYE TECHNOLOGIES INC. in South and FIREPAD INC, in Mountain Vis inher streaming video and ari ion to Santa Clara, Calf.-base M INC 's handheld drvices. . . RLDCOM INC. will appeal a ng by the EUROPEAN COMME If that blocked its \$115 billion

StarBand to Offer Satellite Broadband

Gilat, Microsoft, EchoStar invest in

satellite access Internet company BY JAMES COPE NEWSY ECRMED

venture backed by Microsoft Corp. has set the stage for the rollout early next year of a satellite-based broadband Internet-access system for business users.

StarBand Communications Inc. in McLeon Vs. Just week announced an early implementation of the system: It is providing the Navaio, Hopi and Havaquesi Indian reservations in Arizona, Utah and New Mexico with satellite links to Northern Arizona University's distance-learning programs in

Flagstaff, Ariz. StarBand was formed last week by Microsoft Gilat Satellite Networks Ltd. in Petah Tikva, Israel, and EchoStar Communications Corp. in Lit-

Gilar's vice president of investment relations. Dianne

Vanileher said the consumer version of the broadband satellite Internet system will be

PACK MULES help bring StarBand's two-way s

more robust version for basinesses will be rolled out in the first quarter by McLean-based Spacenet Inc., a wholly owned

The satellite system has also been tested by Caterpillar Inc. in Peoria, III. Gus Otto, a systems architect at Caterpillar.

subsidiary of Gilat.

said the equipment used for the consumer and business services of the system is fundamentally the same. If tests pan out, Otto said, be believes the two-way satellite system could provide videoconferencing from remote sites around the world.

Consumer Version Coming

The consumer version will be marketed through Fort Worth, Texas-based Radio-Shack Corp.'s retail outlets in conjunction with Microsoft and Compaq Computer Corp It will also be sold through dealers of the Dish Network the TV satellite service owned and operated by EchoStar

The system will have a downstream speed of as much as SOOK bit/sec. and an upstream speed of 153K bit/sec Because it's a two-way satellite system, it won't require a phone line. VanBeber said. Roberta Wiggins, a director and an analyst at The Yankee Group in Boston, said what Gilat is doing with StarBand and Spacepet is both a *business

play and a consumer play." The package will compete with both Digital Subscriber Line and Integrated Services Digital Network landline connections, she said.

is very imaginative and creative.... Virgio's interest does not surprise me at all."

Durid Gusky, an executive at the Wathingtoo-based Association of Communications En-terprises, which represents telecommunications resellers, said Virgin has timed its plans well to move into the U.S. market. "Uotil recently, the relationship between wireless car riers and resellers has been

adversarial, but that's started to improve," be said. Virgin has the potential to succeed in the U.S. *because the company is a killer marketer," said Jeff Kagan, an Atnta-based wireless analyst. "It's not who has the best network; it's who has the best

marketing," be said. Ken Dulaney, an analyst at Gartner Group Inc. in Stamford. Conn., said he doesn't doubt Virgin's marketing skills "[But] I'm not sure I see the upside," he said, "People wan cheaper phones and service, and whoever gives them that

U.K.'s Virgin Group Plans For U.S. Cell Phone Venture

Anticipates revenue in the 'hillions'

Virgin Group Ltd. in the U.K. plans to sign a deal within two months with a major cellular carrier to start offering its own branded cellular phone service in the U.S. Virgin, controlled by airline

and music entrepreneur Richard Branson, wants to develop the first global mobile telephone business, said John Tantrum, president of Virgin Mobile USA, which is currently housed in a technology inenhator office space in San

Virgin Group started offering mobile service in the U.K. this year in partnership with a

company owned by Germany's Deutsche Telekom AG. In April, the company signed a deal with Sine Tel. a subsidiary of Singapore Telecommunications Ltd., to provide mobile service in Singapore, Hong

Koog and South Korea. In February, Virgin signed a deal with Cable and Wireless Optus Ltd. io Australia to provide mobile service in that country. Virgin Group has big plans

for the U.S. wireless market. Tantum, a former Mackenzie and Co. consultant, predicted that revenue from Virgio Mobile USA will eventually be in "the billions of dollars." Tantum said Virgin Mobile

USA will follow the pattern already set by the company in its other wireless deals. It plans to form a joint venture with an established carrier, set itself up

and then resell airtime to what the company views as its target audience: a core of young (ages 15 to 30) consumers the company believes it can attract with a targeted marketing campairs that emphasizes the "fun cissed with the Virgin brand." Tantum noted that the company also expects to "get some

as a virtual network operator

corporate business." Data Services to be Offered

Virgin also said it wants to sell data services in the U.S., starting with the text-message offerings popular in Japan and the U.K. and then expanding to wider hand service when network structure permits.

Major U.S. wireless carri

contacted by Computerworld last week declined to say whether they are engaged in talks with Virgin. But Ken Woo, a spokesman at AT&T Wireless Group in Redmond. Wash, said be believes Virgin could become a force in the



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Outrage Prompts Amazon to **Change Price-Testing Policy**

Retailer will also refund some customers

N THE WAKE OF CUStomer outrage at both a recent pricing glitch and a price-testing policy. Amazon.com Inc. last week said it would alter its price-testing policy and give sumers said they were unhap-

nartial refunds to consumers who paid higher prices than Over the past two weeks, the rany has received negative feedback from customers on two fronts. First, some con-

In a separate incident, customers said they were angry when Amazon wouldn't honor lower prices they had been

quoted on some DVDs. Amazon blamed a Sept. 7 computer elitch and said it wasn't oblinated to sell the items at the in correct prices. When the online retailer dis-

ment customers

covered the glitch, it e-mailed customers who had murchised DVDs at the incorrect prices and asked if they still wanted to purchase the isems at their correct but higher prices. This was done in accordance with Amazon's pricing policy, said Amazon spokesman Bill Curry. That decision apparently

upset customers, several of whom have been wenting their anger in the chat room of DVD

2 Web size dedicated to DVDs. test policy that offered different prices for the same DVD to Dan Bither of Wilmington Del., said he would file a complaint with his state's attorney or the \$16.99 price be was originally quoted for a DVD boxed set. He said Amazon e-mailed him, quoting a price that was

470% higher - \$79.99 - than what he was originally quoted In an e-mail Bither received from an Amazon.com cur-

that he forwarded to Computerworld, the company blamed the incorrect price on price testing, not a computer glitch. In the event Amazon conducts price tests in the future. said Curry, it will automatically charge every customer the lower price and has now taken steps to refund the difference in price to customers who paid the higher test price.

which lowered the total price.

JUST THE FACTS Price Furor testing policy

How it happened: s Stories surface that Amazon che different prices for the same DVD

a Amazon says the price discrepa are part of its price-testing policy a Angry customers let Ama: m Arnazon changes its price-to policy to ensure that all corons

Barrett Ladd, an analyst at Gomez Advisors Inc. in Lincoln. Mass., said Amazon's de cision to change its policy reflected its consumer focus.

But, Ladd added, the fact that Amazon.com didn't realize the impact before could mean that "maybe [Amazo didn't think anyone would find

out about the [price tests]." THIS ISSUE

license* for 35% of the price of Stephen Coleman, chief opa perpetual license.)

erating officer at SpotOn Inc What's happening to Orain San Bruno, Calif., built his cle's users is similar to what happened to mainframe users Web navigation service figura few years ago, said David ing he would host on Oracle -Floyer, an analyst at ITCentrix until he saw the price. Oracle's price "was going to be prohibi-Inc., a consultancy in Mountain View, Calif. As markets tive," especially for upgrades, said Coleman, so he ported his mature - and user dependensystem to IBM's DB2. (Woods cy on a product grows - ven said Oracle does offer start-ups dors with dominating market the option of a two-year "term shares are able to more easily push pricing models that can end up heing extremely expensive if users aren't careful

Floyer said. He advised customers to negotiate long-term Ditka Reiner, president of Reiner Associates Inc., a San Rafael, Calif.-based consultan cy that helps companies need tiate contracts, also compared Oracle's pricing model to that of mainframes. "I've talked to two or three clients that said

they'd walked away from Ora cle because of this pricing model," she said. Woods said customers will come to appreciate the terms. "The more I talk to fuserd and the more I am able to articu-

DB2 Universal Data Version 7.1, Enter am getting," she said.

Nordstrom to Replace CIO

Slumping sales lead to executive purge

Slumping sales growth has mpted Nordstrom Inc. to replace several key executiv including its first CIO, who departed last week after just sev en months on the job.

A spokeswoman for the ven-erable Seattle-based retailer said the company could announce a replacement for exis-ing CIO Richard Lennon as early as this week. Lennon joined Nordstrom in February after leaving Louisville, Ky-

hased Brown Forman Corn. We felt we needed a chan in the leadership to move forward on our technology initiatives," said Nordstrom spokeswoman Paula Weigand, noting that the company is improving its replenishment and inventory management systems.

Like many retailers, Nordtrom faces significant challenges as it re-evaluates and nology systems, said Carol Ferrara, a retail analyst at Stamford, Conn.-based Gartner Group Inc. Regarding the Nordstrom CIO's departure, Ferrara said cultural issues and times make it "difficult

for the CIOs to become effective and integrated into fami 'lt's interesting, especially is retail, to see the kind of knee-jerk reaction to a bad

Bruce Nordstrom, 66, came out of retirmeent to take over

as board chairman when John Whitacre resigned last month. Bloke Nordstrom is the new president, and Pete Noedstrom ends the full-line store group

replacing Marty Wikstrom. Continued from page I

Oracle

er UPU, which is currently \$100. For an eight-processor, 700-MHz Intel-based machine, that comes to \$560,000. Tim Talbot, vice president of

information technology secvices at PHH Vehicle Management Services LLC in Hunt Valley Md. balked "I said Wait a minute. You are chareing us for the whole server, but we are only using part of the server for Oracle." Talbot said he was able to get some concessions after negotiating and threatening to go with Sybase Inc. instead. "It's feeling like

I'm negotiating with [Comput Associates International Inc.l. which is not a pleasurable experience," he said. facqueline Woods, vice president of global practices at Oracle, said the pricing scheme was an attempt to simplify the pricing model and make prices sore predictable by eliminating widely varying discounts. The scheme replaced concur-

ences (see chart). Prevo did end up buying Orrent and named user pricing. acle, he said, after negotiating a as well as a Web-specific liway around the UPU scheme,

cense based on 50 concurrent users, all of which were often heavily discounted. Named user pricing is still available as an alternative in some cases. Woods said the climination

of discounts beyond volume discounts is what may have upset some customers. "Today, if your volume means you get a 25% discount, then that's your discount," she said. But users said it's not quite

true that discounts no longer exist, as exceptions to UPU pricing are available. Woods said that in some cases, users who can prove that only part of their senser is to be used for the Oracle database could get an exception and pay for a lower LIPS Leonar Prevo responded, "It's not

the discount it's the total amount that's just too high." He said the price quoted to him by Oracle was about "10 times what Microsoft would charge on the same configuration and a flat comparison among the three major vendors does show significant price differ-

ing. Oracle's Universal Power Unit considers clock speed as

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Western Union Site Back Up After Breach

Opportunity to copy credit-card numbers shows need for greater security, expert says

ESTERN Union Holdings Inc.'s Web site was out of comion for five days last week after a malicious hacker broke into the site and apparently copied the credit-card or debit-card numbers of about 15,700 Western Union customers.

Peter Ziverts, a spokesman at WesternUnion.com in En-

elewood. Colo., said petting the Web site back online took two days longer than company officials originally expected after discovering the security breach during a scheduled audit of site performance on Sept. 8.

Before the site went back online last Wednesday, he added WesternUnion.com's developers fortified the site's security io an effort to ensure that customer data doesn't get compromised again.

curity breach that opened up second to the confitured date was caused by "human error" during routine maintenance and performance management testing work on the Web site,

which had been upgraded in June to allow users to send money over the Internet. A key file apparently was left unprotected after the work was done. creating a security hole that could be used to enter the site.

After the breach was discovered, Western Union officials immediately shut down the Web site and began contacting omers who had transferred

money online to notify them of the incident. It also informed the National Bankcard Association Inc. in San Diego to an attempt to circumvent any fraudulent use of the stolen card numbers. Ziverts said no illegal

with the fact that it is a de fa

billion copies sold," he said.

said that because of the govern

the creation of PGP

it is trusted.

Whitfield Diffie, an eng

best known for his 1975 discov-

ery of the concept of public-

key cryptography. He said that

despite some problems, RSA

Security "gave pretty good val-

ue for the money" by organ-

izing a standards organization

attempts to buy goods had been reported thus fo Elian Levy, CTO at San Ma teo, Calif-based Securityfocus.com, an information secu-

rity portal that reviews security breaches, said Western Union hadn't provided enough information to determine what type of human error was re sponsible for the leak of credit standard and there are half a card information. But Levy Del Torto, a founding em-ployee at Santa Clara, Califsaid a breach while the system was in maintenance mode surbased PGP Security Inc., said gests a configuration problem.

Continued from page 1

Encryption

tool kit that it said it was prohibited from marketing in the U.S. due to RSA Security's liing agreements. The company previously charged up to \$20,000 for the tools. David Thompson, an analyst at Meta Group Inc., said having the algorithm in the public domaio will allow for uniform

cryptographic standards. "Longer term, increased availability of cryptographic functionality will allow easier and less expensive integration of PKI (public-key infrastrucplications and thus help overcome a major stumbling block," he said.

The RSA algorithm has become an encryption standard for many e-commerce security applications (see box, Page One). The patent for it was is sued to MIT on Sept. 20, 1983 and licensed exclusively to RSA Security. It would have expired on Wednesday but RSA released its claim on the natest earlier this month. The compaov. which will still sell its

BSAFE cryptographic software. said it released the patent early to counter any "misinformation" regarding its expiration according to a statement.

Meanwhile, despite the fresh start, some critics last week continued to isment the hold the patent had on the security market for the past 17 years. Over the past two decades, the RSA patent and other public-key patents did more to suppress the deployment of public-key cryptography than the [National Security Agency],"

said Phil Zimmerman, inventor of personal cryptography product Pretty Good Privacy (DGP). "Now at last, we can breathe freely and implement our own code" RSA spokesman Steve Casey

noted that more than 800 customers have licensed the algorithm to develop more than 1,000 applications, including Microsoft Windows, Lotus Notes and Cisco Systems Inc. routers, and to protect trillions of transactions. "The RSA alporithm has created a de facto standard, and I find it hard to reconcile that fact with suggestions that we have somehow chilled the development of the market " caid Cases

Casey also denied that RSA Security's licensing terms kept companies from using the algorithm to develop their own innovative implementations. "You can't fault the company

of licensees, among other achievements. "We are better for protecting its intellectual property and taking steps to set off having someone who has an interest in the technology and seems for its licensing agreements. If the terms were so goes hawking it as opposed to oncrous for people, it is hard to just making it available," said reconcile those statements

that because the RSA algorithm More Security Meeded was developed using govern-

ment funds and published in a Whoever broke into the scientific journal, it should nev-Western Union site may not er have been patented. (Casey have used the same techniques used to steal credit-card informent funding, the patent didn't mation from other large sites apply to government imple-mentations.) But Torto said the that maintain credit-card databases, but the number of such events suggests there is a need patent drove people to develop better algorithms and spurred to do more to secure such syses, said Levy

Levy said one possible solu Torto, speaking at a forum sponsored by the San Francistion to the problem, issuing co-based Electronic Frontier one-time use credit cards, was Foundation, added that the recently suggested by Ameriubiquity of the RSA algorithm can Express [News, Sept. II]. He said that would be a better and its longevity will ensure that it continues to be used. It's solution than the proposed Senot necessarily better than cure Electronic Transaction newer algorithms, he said, but Standard (SET) promoted by credit-card companies, which would set standards for enat Sun Microsystems Inc., is crypting and authenticating transaction data.

"One-time credit cards would be easier to implement and would not change the way consumers and merchants do business," said Levy, "It was way too complex for consumers to go out and get certification from banks and download new software.")

ETHIS ISSUE

From RSA's Move Comes Free Tool Kit

per tool list, which un-

et of marketing for Balti 's U.S. cowration

d version of KeyTools Life levTools Pro that includes all ential elements needed to nect to a PNI, including cryp from a Cart

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Federal Agencies Get Poor Grades for Security

But CIOs blast report methodology, value

CONGRESSIONAL subcommittee in ability of federal agencies to protect computer systems from terrorists and hackers last week released its first report card on government information security practices, handing out Fs and Ds to about half

of the group. The results were "very dismal," said Rep. Stephen Horn (R-Calif.), chairman of the Subcommittee on Government nagement, Information and Technology. There is no room for compiscency, for the stakes

are simply too high." The report card put federal ClOs, as well as the White House, on the defensive at a subcomittee hearing. No federal agency received an A, and the overall grade for the largest federal agencies and depart-

ments was D-In response, John Spotila, an dministrator at the White House Office of Management and Budget, questioned the committee's grading methodology, the report card's value and its implied conclusion that

ting ducks for backers. I think the reality is that the racies have worked very hard to protect the confiden-Spotila, who asked how an overall grade could be applied to the federal government's 26,000 separate systems. "What does that tell you about how

are done well (and) which systems are not?" But the General Acco Office (GAO), the investigative arm of Congress, backed up ttee's findi The risks are very high and the breadth of the potential im-pact very wide," said loel Willemissen, who heads the GAO's informatioo systems division and testified at last week's

hearing. *Federal CIOs are not ask at the wheel," said John Gilli gan, CIO at the Department of Energy, Gilligan defended the efforts of federal agency information technology leaders to

improve security. He also faulted a lack of funding and oversight for governmentwide sety programs. The grades were based on a Minuestine curvey seet to \$4

federal departments and agen cies. The questions covered six broad areas, including security planning, the protection of software and systems from unauthorized access and the ability to continue operations in the event of disruptions. The GAO audited the results and released a report claiming

that federal agencies have "se-

rious and widespread* securi-)

The departments and accecies that flunked included the Small Business Administration

culture lustice Labor Interior and Health and Human Services The Social Security Administration had the group's

B Social Security Administration

B- National Science Foundation

C- Department of Education, State Departmen C- Housing and Urban Development, Commerce Depart-

nt, Agency for International Development

D+ Department of Defense D Department of Veterans Affairs, Treasury Department

D- Environmental Protection Agency, General Services Administration, NASA F Office of Personnel Management; the departments of Health and Human Services, Agriculture, Small Business

Administration, Justice, Labor and Interio complete Departments of Energy and Tra highest score, attaining a B. Federal CIOs said impo

ments will take money. "The realizy is that until computer security is fully funded, it will remain much too vulnerable." said Ira Hobbs, deputy CIO at the Department of Agriculture. That agency, said Hobbs, fended off some 250 backer attacks in the last quarter. A few of the attacks succeeded in altering Web pages, but no significant damage was done, he said.

Rep. Jim Turner (D-Texas) said the security problems underscore the need to create a federal CIO position. The CIO would be responsible for IT policy at all federal agencies (see story below). Turner has introduced legislation seeking the appointment of a federal CIO. Security spending "provides the potential for the expenditure of yast sums of federal dollars in a very inefficient

Spotila said he disagrees that the federal government needs a CIO. "I just think it's a very complicated problem, it requires a lot of effort within the agencies themselves, [and] it's not something that can be solved with a top-down approach by one person, which is not to say that we don't need

Hearing Stresses Need for Federal CIO Post

\$40B in IT spending worries lawmakers

The resistance of federal officials to create a CIO post to manage enterprisewide informarion technology is bucking a

big trend and is coming under attack in Congress. The federal government which is perhaps the world's

largest IT user - is set apart well the most important things are being done, which systems from nearly all major corporations and most states by not having one person responsible for setting and coordinating IT policy. Federal departments and serncies now seemd about \$40 billion annually on IT.

This investment is being made "without the benefit of significant, governmentwide leadership," said Rep. Jim Turner (D-Texas) at a hearing held last week on the CIO issue by the House Subcommittee on Government Management, Information and Technology. Turner said he believes the lack of a coordinating authori ty is leading to duplication in IT spending. He's one of two lawmakers who introduced a

federal CIO post. The idea of establishing a federal CIO position isn't new

But the White House's refusal to create such a post is under fire, especially after the appointment of a Y2k czar, John Koskinen to coordinate feder. al and private responses to the year 2000 peoblem

The government's success in combating the year 2000 problem demonstrated the benefst of strong central leadership," wrote David McClure, a General Accounting Office of-

ficial, in a report released last week recommending the a pointment of a federal CIO. A federal CIO could set priorities for the government and coordinate electronic govern activities and cross-agency projects, wrote McClure. But Sally Katzen, deputy bill seeking the creation of a director of the White House

Office of Management and Budget (OMB), defended the OMB's current role as an IT coordinator and said ber nerney has already achieved much of what critics say a federal CIO would bring, "Every agency is not reinventing the wheel," she said. "We have an effective forum for sharing best practices."

The OMB's only mistake said Katzen, is that "we have done a lousy job in communi esting how much progress we have made." But Katzen also urged the committee not to seek legislation with the presi-

more coordination," he said. *Legislation now would only tie the new president's hand,"

chessid

Growing Trend The trend toward centraliz ing government CIOs is grow ing: 23 states have CIOs who report directly to their sover nors. In 1998, only eight states had such an arrangement, tes-tified Otto Doll, South Dakota's CIO and president of the Lexington, Ky-based National Association of State Informa tion Resource Executives,

appers. In 24 states, CIOs report to cabinet-level officials. "One powerful dynamic of IT is that it can enable and integrate all government ser vices and initiatives," said Doll. "A CIO is necessary to convene emation stakeh

Rep. Tom Davis (R-Va.) has also introduced a bill to create a CIO position. "I strongly believe that establishing an empowered federal CIO is essen tisl," he argued.

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Sun Introduces Fee Cap for Java 2 Enterprise Edition

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2 Enterprise Edition (TEE) 13 erupted in the past over fees.

Sun Microsystems Inc. last specification. The new plan is Although Sun refused to disweek introduced a new licensjamed at eliminating some of close financial terms, it said must pay Sun for access to the

Members of the Java Com munity Process (JCP) executive committee - which com prises 15 software vendors, including Sun, IBM, BEA Systems Inc. and Oracle Corp. have two weeks to review the licensing terms and submit comments to Sun.

The vendors are also under orders from Sun to not discuss specific licensee terms until the conclusion of the committee review process.

"Sun is not obliged to take these recommendations, but the whole purpose is to arrive at an acceptable set of licensing terms without having a publicly acrimonious debate out it." said Carl Zetie, an analyst at Giga Information Group Inc. in Cambridge, Mass. "Hav-ing that debate conducted in the press is not good for Java."

dance of Power

For J2EE 1.2, the 22 current licensees each negotiated fees separately with Sun. Although Sun's standard J2EE contract calls for application server lies to pay fees equal to 3% of net sales, most vendors negotiated unique licensing contracts, Sun confirmed.

Several vendors had balked at that flat-fee approach after it was announced for IZEE 1.2 licensees, said Rick Saletta, marketing team leader for 12EE. Sun bopes to curb that *backlash" with the new price ceiling structure, be added.

Zetie said Sun's amended policy should quell some of the negative response to J2EE license fees that emerged in the past. But, he added, Sun still needs to do more to share con trol of the specification process with other vendors. He noted that Sun appoints 10 of the 15 JCP executive committee members, in addition to having yeto power and a seat on the committee.

Sun said it's considering decreasing its number of nominees to the ICP — from 10 to nine — in response to criticism from vendors and analysts. IBM, a JCP executive com-

mittee member and longtime lava licensee, said it's still reviewing the new policy terms. "In the final analysis, Sun

as the final word on the technology," said Scott Hebner, di rector of e-business marketing at IBM. "[That] is inco with the nature of the Internet Java will prosper more if it be-



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team and business processes.

BRIEFS Compan Sees Need

For New Partners Competer Corp. said It's ing for new types of companies artner with. The hardware venfor has mainly pertnered with soft vendors such as SAP AG and Oracio Corp., as well as service and Inc. A spokesman said Cor

es like Place ed Commerce One Inc. and er, Mass.-based CMGI Inc., Inktomi Buys Live Net Broadcast Company

will include e-commerce-centric

enten Culif -

torni Coro, in Foster City, Calif. rks Inc., an online broadcast ing software development company, in a stock deal valued at about \$1.3 billion, Fast Forward, a 2-year-old start-on in San Francisco, makes cts that can profile online

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Clars, Calf., that specializes in tec ns, in a deal valued at wy \$54 million, in addto being the third largest seller of cal books online, Fathrain of rs a survice that allows composite of individuals to distribute their

Short Takes

IUS INC., a U.S. designer of eed memory interface techhas asked the U.S. INTER-MAL TRADE COMMISSION to look into allegations of unicertal is parts by South Koron's HYUNGAL MCS MOUSTRIES CO SOFT CORP.'s pietforms

CEO: PeopleSoft Has Changed for the Better

First-half profits show vendor on upswing

THEN Craig Corney took over as CEO People Soft Inc. last September, the business applications vendor was facing ma-

or challenges. Among them was a weakening demand for its enterprise resource plan nine (ERP) software - as well as that of bigger rights such as SAP AG and Oracle Curp. that belowd saddle the comesny with a \$177.8 million loss for

Key members of People-Soft's management team de fected, and the once fast-grow ine company laid off more than 400 employees Conway also was in the unenviable position of taking over for PeopleSoft founder Dave Duffield, who was popular with users of the Pleasanton Calif-based year

dor's software

A year later. PeopleSoft has Gnally released its Web-based PropleSoft 8 applications upgrade after pushing the shipment date back from the mid dle of last year. And for the first half of this year, People-Soft reported a \$32.7 million profit. Conway spoke with Computerworld about his com-

pany's fortunes. Q: New is the response to the initial release of PeopleSoft 87 Did the delay

A: What delay? You may be confusing us with Oracle. At our user conference [last] Octaker we indicated we would Ishiol PeopleSoft 8 by Sept. I. and we did. The reaction has

Q: Is the future of PaopieSoft in ERP. customer relationship manage (CRM) or a mix of the two?

A: CRM has become the largest-selling product line [But] any enterprise applications company almost by definition is going to provide both front-office and back-office applications. And we feel that is

the definition of e-business

the integration of customer, supplier and employee O' We've board a let about the soften ing of the ERP market. What's the key

to success them? A That's very old information. The news on the street today is that over the last three to four months, the en-

terorise (applications! market is coming back. It was temporarily subdued in 1999 - Y2k caused a lot of companies to stop spending on very large enterprise systems. [But] nytry analyst on the street



Q: How much has the company changed since you came on board, and how do you think you that change? A: It's a very, very dif-

so we're a better-run company. And I think the company's morale and confidence is at an all-time high. PeopleSoft was certainly hardworking but also a place where the culture was been reporting that the market very casual. When customers visited they were likely to see does and cats in the office be-Q: Do you have plans to address the cause it was a family atmos difficulty of ERP and CRM installaphere. I didn't come in a dra conian way to try to change the & In the last 12 months, all company overnight. [But] I femerorise application) implethink I added an incredient of mentations have improved intensity and accountability The average PeopleSoft imple and competition to the curpo-

> of rapid implemen Q: You recently dropped about 70% of tation tools, Large the outside consultants that worked global systems can be with PeopleSoft on application proj done in less than six ects. Why did you do that, and how months. That's the has it played out?

rate culture.

A: About a year ago, we met with our consulting partners. There was a large component of [them] that really didn't offor great value to PeopleSoft We culled our partners down to concentrate only on ooes that really returned a lot of valuc. Our partners are now more

Siebel Gobbles Up Another Software Rival

is making a strong rebound.

mentation is now less than five

Siebel Systems Inc. last week announced a deal to scoop up rival Janua Systems Inc. in an acquisition that Siebel executives bope will give the San Mateo, Calif-based vendur a leg up in selling customer relationship management (CRM) software to financial services

companies and insurers With the ink borely dry on the four previous acquisition

it has made since lanuary Siebel said it would extend the buying spree by purchasing Toronto-based Janua in a stock swan valued at \$975 million based on the Sept. II closing price for Siebel's shares. The sequisition of Janua - which had sales of \$13 million last year and \$12.6 million during the first half of this year - is

expected to be completed in the fourth ouarter Through the deal, Siebel will expand its line of CRM applications by adding Janua's Enterprise Suite 2001 software which lets financial institutions and insurance companies

with customers in various channels, including Web store fronts, call centers and resellers, lanna's users include Merrill Lyncb & Co., Lehman Brothers Holdings Inc., First Union Securities and The All-

Siebel said it plans to com bine the Janna software and its own applications for financial Web-based product suite, due



[Financial services) is a market Siebel

has slowly been trying to crack. A REPORT FROM CONSULTING

In a report on the deal that was released last week, Boston based consulting firm AMR Research Inc. said the buyout of Janua neutralizes a tough competitor and "it looks to be a well-spent billion dollars" for Siebel. Financial services "is a market Siebel has slowly been trying to crack, but too often [it] loses deals to Janua," the AMR report said

But integrating the two lines of software won't be easy because of overlaps between them, AMR added. "It will be tricky deciding which pieces will be used to form the new [unified] product," according

Steve Bonadio, an analyst at Meta Group Inc. in Stamford, Conn., agreed that it will likely "take a serious amount of time to integrate the [Janna] appli cutions into the Siebel fold" But he said the acquisition should give Siebel users *some rich functionality" that the CRM market leader's software doesn't currently support.

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make the Lotus technologies

While Notes isn't currently

part of the ASP Solution Pack

Lotus officials indicated that

there will be an announcement

on Notes outsourcing within

more scalable," Levitt said.

Lotus Applications to Be Available for Rent

Version ready for application service providers, sans Notes

OTUS DEVELOPMENT Corp. last week announced its ASP Solution Pack, which will allow resellers to host a bundle of Lotus applications and resell them piecemeal to smaller customers or

business units within a large Lotus said it will maintain its pricing model geared toward large corporate customers, with a minimum \$10,000-perpanies hosting the software. *Only the serious partners need apply," said Mark Levitt, | plished by sales staff.

an analyst at Framingham, Mass-based International Data

Lotus CEO Al Zollar extolled the importance of application service providers (ASP) and said Lotus won't be in the business of hosting its applica-

In catering to the service providers, the ASP So-lution Pack makes it easier to tions and other Domino-based

products from Cambridge, Mass-based Lotus such as Domino Web Mail and calendaring, QuickPlace, Same-

month commitment from com- | graphical interface, which said could now be accom-

> The advantage for service providers and small to medium-size companies is that end users can be provided access to

might become more pervasive with the arrival of disiMine Inc., an application service provider (ASP) that officially opens for business this week time instant mes-The Kirkland, Wash-based ASP, which was founded in March by former Microsoft

Web Data

pensive in-house information and CEO of netASPs, a Lotus partner and ASP in Herndon. Va., said Lotus applications are complicated to install and maintain and expensive for most organizations' IT departments.

technology support.

John Whiteside, president

several weeks. veiled its digiMine Services, ASP to Mine including the Data Slurper. The Data Slurper assembles

Web server data from Oracle, SOL, DB2 and other databases and securely transmits it to the company's data-mining application, which is bosted off-size Data mining and analysis The ASP then runs a series of predefined reports on

everything from page-view to online-event analyses. Today, organizations requ a "special infrastructure to do data analysis," said Frank Gillett, an analyst at Forrester Research Inc. in Cambridge,

swaggerpa

set up new accounts through a applications, without the ex- Corp. employees, last week un-

IBM congratulates the 2000 Solution Excellence Awards winners.

Hot Java Solution: Interactive Objects Software GmbH, Germany

Best Web Site: MBS Textbook Exchange, Inc., USA

e-Commerce: CommerceQuest, Inc., USA

Self-Service Application: Shared Medical Systems, USA

Cross Industry: Tata Infotech Ltd., India

Born on the Web: e-ASG, USA onl Not KL

Wireless Internet Initiative Advances

Expanding on an initiative begun in 1996, Intel Corp. and nine other companies have announced a pact that they said Gillett said digiMine offers a general-purpose architecture

for data mining and analysis

that can generate standard re-

ports, or users can pay to have

pologies to the masses. The Mobile Data Initiative Next Generation (MDI-ng) will

user drop-off during our registration process." Chu added, 'It's been very convenient for us because we haven't had to add more soft-

custom programs written that ware to our PCs." go beyond the preconfigured Mimi Green, a market ana analyses lyst at Dialnad.com, said the Yongmin Chu, marketing recompany also benefited from search manager at Dialpadnot having to hire more emcom Inc. in Santa Clara, Calif., ployees to develop and manage has been using a beta version a similar application. Usama Fayyad, digiMine's of Data Slurper and plans to

continue using the service. He CEO and co-founder, said his said his voice-over-Internet firm's top competition would Protocol company has used come from information techdigiMine Services to help with nology shops building their a range of issues, including own data-mining software.

they hope will help bring easyto-use wireless Internet tech-

take over where the original MDI left off, according to the eroup. That work began with IBM and others, focusing on mobile computing via cell phones.

handbeld durious

The new group said it will expand that work by reviewing and market barriers to widespread Internet use through

Alan Reiter, an analyst at Wireless Internet & Mobile Computing in Chevy Chase, Md. said the new eroun will find ways to expand wireless Internet use, "Basically, Intel wants to sell chip sets," he said. "It knows that standardization is generally good for vendors as well as consumers."

Other standards groups do exist, however, so the marketplace is still contested, he said. Andy Seybold, editor of the

newsletter "Andy Seybold's Outlook" in Boulder Creek, Calif. said he was less enthusiastic about the group's approach.

"This whole wireless Internet thing has been overhyped and underdelivered," be said Daniela Singer, a public relations specialist at Intel GmbH in Munich, said two of the original MDI members, L. M. Ericsson Telephone Co. and Nokia

Corp., both strong supporters of the Wireless Application Protocol (WAP), may join MDI-ng later.

Ericsson and Nokia didn't respond to inquiries by press

WAP is one of the issues that MDI-ne plans to address, she said, adding that the group doesn't intend to set its own standards.

Alliance Forms to Set Web Standar



MARK HALL

Information gap

HAT WAS NO manufacturing problem putting Bridgestone/Firestone and its defective tires in the glare of an angry public. That was an information problem. One that may indeed kill a venerable American brand. The final answer about what went wrong and why isn't yet known. When it is, I bet we'll learn that with the right kind of integrated information system, managers at the Decatur, Ill., plant that was the source of the faulty tires would have discovered the flaw before it be-

came a problem. Today, that system doesn't exist. At a press conference held last month early in the debacle, executives from both Bridgestone/Firestone and Ford, whose SUVs ride on the afflicted tires, said they lacked "specific information as to why this is occurring," Although more is known today than a month ago, we're still in the dark about why executives at the two

anies were in the dark. just last week, both Bridgestone and Ford committed to installing

supply-chain information systems to prevent anything similar happening in the future. But they are going about it like pugilists instead of century-long partners, which goes to show the depth of destruction this information

In last week's tit for tat before a Senate committee, Ford CEO Jacques Nasser said, "This

John Lampe, executive vice president at Bridgestone/Firestone, also came out in support of "early-warning systems" but called for "tirepressure indicators in the vehicle."

With the Firestone brand teetering, the company recognizes that it must act. Lampe said, "Witbout regard to costs to the company, Firestone has elected to make this voluntary recall because of its commitment to public safety and consumer confidence." Suddenly, money is no object. 1

wonder if making an IT iovestment a couple of years ago would have prevented this fiasco by getting the right information to the right decision-makers? Less than what it will cost to replace 6.5 million tires and regain the confidence of the more than I million car owners

This may prove to be the costliest information gap in corporate history. One, we'll discovDON TAPSCOTT

Forget the skeptics: WAP is here to stay

ON'T BELIEVE the WAP skeptics. Wireless Internet access is the direction in which we will soon stampede, and right now, Wireless Application Protocol (WAP) is still on track to lead the thundering herd. So it's time to start incorporating WAP into your company's business model and IT infrastructure.

WAP is a set of technical specifications to guide wireless-phone and personal digital assistant (PDA) manufacturers, network operators, content creators and application developers. The intent is to establish a global standard for access-

ing the Internet via wireless devices with small disnlay screens

Liotil recently, WAP enjoyed growing acceptance, but suddenly, its skeptics abound. Much press play was given recently to reports from Europe that wireless customers aren't flocking to WAP sites. The criticism of WAP revolves around two issues: It's an inadequate technology, and it was designed to meet a

need that doesn't exist

To someone accustor to the lush envir large-screen deskton broadband Internet access, WAP can seem ab surd. The typical 1-sq-in. WAP screeo doesn't

display graphics, and because the access is wireless, the speed is achingly slow. But the comparison is bogus. WAP wasn't designed for surfing the Web; its purpose is to re-

trieve specific information for people on the mov A smart, creative WAP application was recently implemented in San Francisco. The transit service is using technology from NextBus to track the real-time position and speed of buses, street cars and trains. Transit riders can now use their handheld devices to access the NextBus WAP site to find out when the pext bus will arrive at their stop. (For updates on innovative WAP sites, sign up for the Cool WAP Site of the Day on www. fiercewireless.com.)

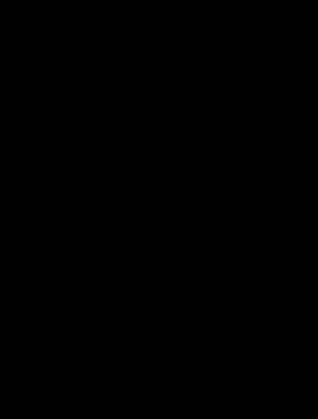
And if you run a coffee shop or newsstand close to a stop, would you like to send a con pitch to riders who have more than 10 minutes to wait? As more sites such as this come online, consumer demand for WAP devices and services will

soar, along with commercial opportunities.

WAP is also well suited for intracorporate use. For mobile employees who simply need price up-











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NEWSOPINION

dates, inventory status and similar information. why bother with the cost and upkeep of laptops if browser-equipped phones or PDAs would be just as effective?

Obviously, WAP specifications will have to rapidly improve to keep pace with advances in hardware; otherwise it will be eclipsed. As wireless speed increases, processors become more powerful and drain less battery power, and dis plays expand and include color, consumers will become more demanding. They'll want streaming audio and video, for example.

But until then, the current WAP standards make sense and enjoy broad support. We are at the awkward chicken-and-egg point in WAP's development, but early adopters of the technology will be rewarded.

IOHN GANTZ Europe is getting ripe for more Net business

VF REEN LOOKING at the worldwide stats for Internet use, and I can tell you this: Europe has come alive! Euro-

peans are going online in droves. Just two years ago, Europe had only half as many Internet users as the U.S., and Internet commerce there amounted to less than 10% of what the U.S. was doing.

But next year, the number of Internet users in Europe will surpass those in the U.S. - to more than 150 million - and by 2004, its Web-based commerce will be almost 90% of that of the U.S. The upshot? If you have neglected to localize your Web sites for customers across the pond.

you had better start. Europe has a bigger economy than the U.S. It's a huge market. The good news is that most companies haven't done much to localize their Web sites In an

April survey of Internet executives. International Data Corp. (IDC) discovered that only half have done anything to make their Web sites reach out better to international visitors Only 20% support a second language, and a measily 12% can take orders to a foreign currency. So nobody's cracked

the code yet The difficulty of dealing with Europe, of course, is that you can't really treat it as a region. Internet users don't behave the same way, even in similar countries. For example, while almost a third of Swedish Internet commerce consumers buy stocks online, less than 5% of Danes do. Almost 50% of the French make travel purchases online, vs. 20% in the nearby Netherlands.

And that's the first key to localization. Language is not as important as culture. Put it this way: If you offer multiple languages but don't change the user experience to fit the culture, you

have wasted your investment in translation. To tackle the European market, you'll need to proceed in a measured way. Most firms start by adding information on their main corporate Web sites about operations in foreign countries and then later translate that brochureware verbatim

The next step requires local, in-county input, either from your own operations or a localization business partner. In this case, site material is updated by foreign nationals and tailored to local markets. This can be quite political - retaining a common look, feel and user experience on the

site but allowing for local control of content. The last stage is full distribution of site cor to local in-country sites, where the sites may have to adhere to corporate guidelines and use standard platforms but are managed locally.

Some cultures

hetter off without IT

sible course of action

PTake Next Stops to

Narrow the Global IT

Gulf." News Opinion.

wants to live the same

There are peoples

Sept. 41

TAKE EXCEPTION to

tion that

So, despite the Web's "worldwide" nature, you won't have a truly localized Web site if your com pany doesn't have Europe-based operations or a business partner. Trying to do business overseas - dealine with customs, local currencies, privacy regulations, performance, languages and logistics will be tough online if you or your partner has

n't already done it online The IT challenge in localization is providing the infrastructure - WANs, security systems, directories, catalogs, back-end databases and transaction systèms, cache and proxy servers - to support linked Web sites in multiple countries.

That includes training, support and belp desk If your Web site goes international, so will your IT department. If you already have a multination al shop, developing a global Web strategy may require centralizing some IT functions that were previously farmed out to the other countries. If you aren't multinational, you'll have to learn boy to become so in a burry.

such costly and painful change on our unsuspecting neighbors, those who would suffer the emotest loss should be

Ernest J. Wilson III's spreading IT throughout the world is the best nos-Senor scientist CSA Inc.

Betstema Cold

ine solution to H-IB

I am always amuzed by AM STIPPRISED bor people who assume that many people have illeveryone in the world informed opinions on the H-IB program [Readway we do in the West ers' Letters, Aug. 7]. Statistics show only how throughout the world many H-IRs have been inwho actively resist the sued, not how many can-"cultural poliution" of didates actually came to the U.S. In addition, many candidates ask multiple companies to

electronic communication. A few smiling buresources with shins givenways are not going newwest their visus to into convince amone that crease their chance of the Internet is less offenevering a project in the sive than television. And IIS It is a hie misconeducating the workforce ception that H-18 consulto handle new technolotants are hired because gy opens the possibility they can work for less. of massive abuse (higher During my 10-year ca learning in the U.S. for reez. I have seen H-18 instance, is rapidly beworkers making six figseem with fat homoses coming last about adapts

tion than about political and stock options. The quota should be indoctrination). Perhaps before givi and but condidates away the engine that has should be required to enprovided the G8 nations ter the U.S. within 30 with such vast wealth. days after the visa bas been approved. This will those who would suffer the greatest loss should not only stop H-18 visa abuse, but it will also be consulted. And per-

IT skills available to the companies suffering Mahesh Goyal President and CEO

Fast Forward Imple irving, Teass. AS/400's record

speaks for itself piece "What's It Like

to Work at the U.S. Seace & Rocket Center (Business, Aug. 21), the surrium community sifter the interviewee reports that his mission-critical systems run on an AS/400 that his environment is more low-tech than one might expect. But how many low-tech systems can make these claims? AS/400 has the highest satisfaction rating of its

independent user group. as surveyed by Computemented in 1999; allows deployment of Linuxava-, Unix-, Windows 2000- and Domino-based applications on a single server, has never had a reported virus while customers have had security

functions operational: has had more than 300 different processors in its history but no cus tomer has ever had to recompile its application

code; has proved in a two-year study that is can deliver 99,97% availabili ty; has proved its operat ine system can operate for more than one year without ever requiring a reboot, in hundreds of customer shops; and is the only system listed in the top 10 performance

of all four public commercially oriented benchmarks. Gerald Kern Senior analysis

Maumoe Ohn Ad stooped too low

OME ON, 19395 You're stooping way too low for my liking. What's up with the Data Return. Victoria's Secret ad was an informativ

[Sept. 4]? I thought this "Newspaper for IT Lead ers." How was an ad such as this accepted? Chris Allieson Warwick, R.I.

comments from its readers. Letters will be edited for brevil and clarity. They should be aded to Jame Ecide, letters tor, Computerworld, PO Bi 9171, 500 Old Connecticut Pat Framingham, Mass. 01701 Feb: (508) 679-4843, Intern latters@computarworld.com. Include an address and ph

ALEX TORRALBAS

OS developers must carry the ball on security

T TITH THE SPATE of viruses and worms that have - finally grabbed everyone's attention. it bears stating what should be, but sadly isn't, obvious: Security solutions rest

with the developers of operating systems The overwhelming majority of viruses, worms and Trojan horses that can affect PCs require access to the operating systems that could stop

these attacks cold without the need for antivirussoftwarelike approaches. And thwarting these attacks is well within the existing technical capabil-Itles of Microsoft Ample or any other operating systems developer. Here's a modest list of suggestions:



■ The "system files" and program directories should be a lockbox. Nothing should get copied to them. altered or deleted without explicit authorization

from the user. This directory shouldn't be used for "INI" files and the like. Instead, create a separate "scratch" folder for these purposes, one that the operating system ignores completely - that is, nothing can run inside this "sandboxed" folder. Program files should be encoded with encrypted keys derived from their pristine, unaltered final compile. Upon installation, this identifier should be noted by the system and stored, again encrypted. Before any program would run, the operating system would be able to recalculate the key based on the program's current state: If there re no match, the program wouldn't run. Installation programs such as InstallShield and Wise should have to comply with operating system manufacturers' requirements in creating encrypted security certificates based on the con

tents of the installation to ensure that installation files haven't been altered. ■ Nothing in your PC should talk to a network or modern without you being alerted to that fact. Obviously, we would need the ability to grant

"always" permissions for LANs and even our Internet connections - but for the latter, an application-specific permission list would prevent Trojan horses from spooping while permitting "safe" programs to run

 We should be able to lock down our browsers from sending a site any information we don't want sent. A simple "anonymous" setting would prevent outsiders from gleaning information such as our network identifications and computer names. ■ We should be able to create lists of restricted words and numbers, such as Social Security and credit-card numbers, that would trigger an alert if they were detected as being passed to a port. All TCP/IP ports should be in stealth mode at all times to thwart backers, unless a PC-side program requires it, and then it should require an OK from the user

■ The operating system should allow for operaticle encryption or decryption of any file or folder. ■ Nothing should write to the boot sectors, any run" sections of the registry or similar start-up

files without our knowing it. Period ■ The operating system should offer a sandbox mode similar to Windows' Safe Mode to test questionable applications before we run them. After all, freeware, shareware and homemade software aren't going to go away. Lots of it is great, safe and useful. But some were created by

dishonest people. You never know! Anyone who sees security as an add-on is way off target. These aren't add-ons: these should be givens. An operating system for the new, connected world must take security into account. Bill, Steve, Linus: Just do it! 9

WILLIAM M. ULRICH

Using an ASP need not mean losing control

AST YEAR, a real estate management executive told me that his and several other real estate companies were forming an application service provider (ASP). The ASP would bandle informs

tion technology functions for these firms, allowing them to eliminate in-house applications, IT staff and related infrastructure. The business plan stipulated that a dozen executives from several real estate firms would join the board of the new ASP. They planned to take it public based on projections that hundreds of companies would sign up for its ser-

vices. While the executive who talked with me said he felt the ASP was beneficial, he had some concerns.

This increasingly common ASP business model exposes clients to certain risks. The executive wondered: What if the company were to unfairly cater to the companies of the founding directors Of greater concern was the potential for the ASP to establish a large client base but fail to provide acceptable services. And there was the possibility that the ASP might ignore certain problems encountered by clients if the founding directors'

companies didn't suffer the same problems. He envisioned a worst-case scenario where the ASP failed and left countless clients with no backup processing capacity ASP risks are real, but why are they more sig-

nificant than those in other IT relationships? Every software license or service agreement has some associated risks, but the ASP model magnifies the impact of those risks. Using an ASP to handle processing requirements means that you'll be curtailing in-bouse processing capabilities. The failure of a traditional outsourcing agree ment might cause a company to reassert control over its information infrastructure. But in the case of an ASP arrangement, companies eliminate or downstze information infrastructures and shift most IT functions to the ASP. The risks increase as your processing infrastructure shrinks and your dependence on the ASP grows

The case of Pandesic [Page One, Aug. 21] helps support these concerns. The announcement of a shutdown and subsequent layoffs at Pandesic caused major concerns amone its customers. Fueling these concerns was the fact that Pandesic's CEO didn't respond to customers' phone calls. Given that many ASPs are still in their infancy. it's unclear how large the ASP market and the associated risks might grow. But as more companies look to ASPs, they're being told to take certain precautions. ASP clients have been warned to audit an ASP's financial statements, build contingency plans in case of its failure, ensure that company data doesn't end up in bankruptcy court and obtain the rights to an ASP's source code for the applications being used.

But these precautions treat only the sympof a business model in need of retooling. If you're looking to form or join an ASP, consider that traditional ownership models, where investors fund a start-up and take it public, offer clients little control over their future. An ASP assumes control of your information management function. an element of your business you may not want to manage but need in order to survive. Given the

high stakes, you should consider a scenario in hich every client has ownership rights in the ASP and input as to how it functions. Shifting the ASP business model to a memberowned entity allows clients to have access to

decisions impacting their future. Consider: Forming a member-owned ASP involves creating a privately held corporation and distributing ownership rights among current and future clients. Clients would exercise control by placi presentatives on a series of regional boards. Profits could be filtered into a publicly held entity, split among the ASP's employees or reinvested in new ASP offerings. This decision depends on numerous factors, including who owns the assets, market potential and third-party vendors who provide services on behalf of the ASP. If you're shopping for an ASP, or being asked to belp form one, consider the benefits of having control over the future of your information-pro

cessing capabilities. An ASP is an extension of your virtual enterprise, and you should consider this when establishing these ASP relationships.



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BUSINESS

EARNING AN A+ In E-commerce

For 137 years, J. L. Hammett has been the first stop for educators buying supplies. And while it doeso't fit the mold of a fast oew dot-com, the company has built a successful e-commerce operation. 38

WIRFLESS WAVE The de ent is:

As the wireless revolution takes off, mobile technology companies are carting out an array of new products to conoct to the loternet, writes Pimm Fox. The problem is that they aren't paying coough attention to what busi-

ness customers really

ONE-STOP BANKING

Banks are starting to offer customers the chance to bring all their accounts oot one screen. It's a service that's bound to take off, say analysts. 349

Talbots is forging ahead with expansion plans, making a record investment in information technology that not only revamped the clothing retailer's aging systems, but could also help it realize more

profits. 142

CALLING ALL sal

While sports fans compose much of the IT department at ESPN.com, it isn't all fun and games, says John Zehr, vice president of technology. While they do make time for the occasional baseball game, workdays average about 12 hours, and employees are always on call. • 44

UNTAPPED Resources

The demand for IT talent is at an all-time high. Yet Latinos are far from being well represented among US. IT workers. To address the problem, some companies, like Xerox, have established programs designed to tap into the Latino community, \$22

ALL-STAR TECHIES

CIOs are in the spotlight these days. If you haven't already been tapped to take calls from the press, it wou't be long. In an interview with Computerworld's Melissas Solomon, William D. Friel, an IT veteran at Prudeotial Insurance, offers tips oo how to work with

BIG BROTHER
Feel like you're being

probably are. You probably are. Online companies are learning that doing business oo the Web depeods largely on their ability to know their customers. But online profiling has sparked cootroversy about bow far businesses can go before personalization turns into an invasion of privacy s 56



TOP PICKS IN EXEC EDUCATION

WHERE CAN YOU FIND the best leadership training programs? Which colleges, conferences and consultants have the best offerings? What about online and video training? Find out from Computerworld's first Executive Education Survey.

46

At the Head of the Class

School supply firm finds niche online

As a 137-year-old purveyor of pencils, chalk, posterboard and other classroom supplies, L.L. Hammett Co. isn't exactly a name that leaps to mind in But take a closer look at its

online performance over the past two years, L.L. Hammett's entry into the e-commerce arena, which began as a costcutting strategy in October 1998 has yielded a \$9.5 million increase in sales, a 200% increase in average-size orders and a 46% reduction in transog costs, from about \$130

to \$70 per neder. *By August of this year, we did as much business online as we did in all of last war." said Rick Holden, CEO of the privately held Braintree,

Movine its time-h business online was a smart

move, said Dan Sholler, an analest at Meta Group Inc. in Stamford Coon "The premise of Hammett's original business and why

teachers bought from them as opposed to at a Staples store is because they had relationships with their customers," he said. Online, "they didn't cut off those relationships, but they did improve their margins because salespeople now don't need to do the administrative work of taking orders."

At the heart of Har e-commerce strategy is E-Zone. an electronic programmes are tem based on sell-side software from Ironside Technoloties Inc. in Pleasanton, Calif. Teachers and school adminisresones who used to place complicated, paper-based orders

"Before, it took a good eight works to do what I can do in one week new" said Kuthy Donaldson, a purchasing clerk who have thousands of items for four schools and 325 teachers in the Penn Yan school dis-

BUSINESS

trict in Penn Yan, N.Y. One reason for the quicker turnaround is that teachers can browse the district's customized electronic catalog. which includes prenegotiated



prices, and select the items

they want to order at Hammett's Web site. This trippers an e-mail request for approval by Donaldson's office. Teachers and purchasing arents can also assemble large orders throughout the school

school boards approve budgets and release funds, buyers can go back online and confirm the orders for delivery to schools.

Meanwhile, fees that Hammett collects from seven partners/advertisers such as Cravola Co., the Easton, Pa-based crayon and marker company. cover about 30% of what it costs Burmett to maintain and undate the Web site. On the back end the Iron

year and "suspend" them on Hammett's site. Then, as the

side Technologies system is fully integrated to Hammett's TRM ASSOCIATION warehouse and inventory replenishment systems as well as the compamy's accounting system. This has worked to cut order processing times from as much as

hours. Hammett officials said. "When an order comes through on the Internet, it is assigned an invoice number on the AS/400 [and] sent to our warehouse, where it's received with a [radio frequency] scanner, picked and packed," said David Merigold, director of marketing. From there, the warebouse system automatically trippers an order to replenish inventory, and an in-

"We're not rekeving anything, so our order accuracy is up, and there's no place for orders to get backlogged," said Merigold. "We're also stripping out a lot of costs on our side plus on the customers eide because it doesn't take schools a lot of time to gener-

atr orders"

Hammett Included its 80 salespeople — who still make sales visits to school districts - in its online strategy by givloss them incentions for miing customers to online. For three weeks, to about three example, Kathy Oakley, a sales representative in MetroWest. an area near Boston, said she still earns a commission on the sales her customers place online But she earns an even hipger commission when she mi grates them to E-Zone.

"I don't feel as though I'm losing at all," she said. ny's workforce will use or

can reach the ordering system vis an Internet heaveser PIMM FOX/VOICE FROM THE VALLEY

Blinded by wireless 1.1. THOSE WITH cell phones, please

raise your hand. With the other hand, please turn over your wallet. It may not be as blunt, but that's the business model for the mobile and wireless industry. Plain and simple.

Trouble is, carriers such as Sorint PCS, Voicestream, ATAT Wireless and Nextel are trying to determine just what you will buy and at what price, and frankly, they haven't got a clue as to what will motivate you to turn your terrestrial office into

a mobile workforce Demo Mobile 2000 in Pasadona Calif. makes me believe there is plenty of neat technology trying to

surf the wireless wave, but most of it will make a business customer yawn. Carriers and service providers at the conference

are pinning their hopes on new data services: everything from taking pictures

with your cellular phone to ordering movie tickets with your PalmPilot. They're forgetting that business pays for the bulk of data services.

Maybe they're just blinded by the wireless explosion. According to J. P. Morgan & Co., wireless will account

for 34% of all telecommunications service revenue growth over the next five years. With compound annual growth of 15% for wireless over the next five years. that means total industr revenue of more than \$100 hillion by 2005 - about a quarter of the whole tele-

ications industry That's a big bag of money

to be chasing. Last year, the wireless industry celebrated by adding 16.8 million subscribers, up 21% from the

13.9 million added in 1998. This growth is coming at a price. Revenue per subscriber is flattening. The average price of a wireless minute, around 25 cents today, will fall to 9 cents by 2005, according to research

from the wireless industry and I.P. Morean. The only customers forecast to pay more are those who have data and voice service. Now,

about 1% of all subscribers take some kind of data service. That will grow to 20% by 2005, paying an av erage \$25 per month - or ab \$40 billion per

And many of those will be businesses using wireless connections to get information, fill orders and check

Despite a global audience of almost 200 million subscribers by 2005, business users may reject lots of this new technology because it doesn't do anything for their

bottom line.

While the new wireless digital camera from Light-Surf Technologies Inc. grabs the cool award, it doesn't seem to be a pressing need for IT users. By contrast. Wayport Inc.

offered conference attendees high-speed mobile Internet access that actually worked. The mobile

workforce needs reliable not frilly service. Indeed. Frank Spindler. vice president Intel, said 80%

of the compa-

are using laptops as their sole computing resource. Undoubtedly, there will be wireless services mobile

professionals crave. Santa Clara, Calif.-based Beyocal Inc. offers quick and conv pient access to personalized Internet content and services via any telephone. In a nifty onstage dem

stration that included the destruction of a Pacific Bell Yellow Pages directory, C. Mikael Berner, a founder and CEO, used a cell phone to search for a hotel he didn't know existed in Gun Barrel, Texas, by asking a series of questions that were answered automatically. He obtained directions and location information and only spoke to a buman when actually making the botel reservation.

If this is the year the mo bile and wireless convergence takes off, firms hoping to profit from the boom in data services had better start thinking shout the business customer. Otherwise, they'll be disconnected.

Your customers are everywhere

Are you?

Make your business mobile

ss w w w peas t t parks t ra breakfast people are using wire est

s who embrace the

st in voice, data and

a . — derstands now

obile business

BUSINESS

Citibank's Aggregation Portal a Big Draw

A month after New York-based have begun filtering in. Citibank launched its free on-Citibank launched its free on-line account aggregation ser-aren't Citibank customers.

For example, balf the users

other major banks are expected to move quickly to set up their own versions of MyCitithe next three to four months,

com, which lets online customers view all their banking, brokerage and credit-card accounts oo a single screen. Most of the top 50 banks will announce their services within

said Richard Bell, an analyst at TowerGroup, a Needham, Mass-based financial services consultancy.

Several banks have already done so. For example, San Francisco-based Wells Fargo & Co. said its aggregation ser vice, which is provided by Atlanta-based VerticalOne Corp., will be available in the fourth quarter. And New York-based The Chase Manhattan Corn said its aggregation service, powered by Yodlee Inc. in Redwood Shores, Calif., will be on-

line by the eod of the month. Banks that don't offer aggre gation services may find customers jumping to competitors, analysts said.

According to a recent Gartner Group Inc. survey, more than one-third of online bank customers are willing to pay to have all their financial accounts available in one place As a result, banks will have to offer account aggregation to retain customers, said George Barto, an analyst at the Stamford, Conn.-based research

Opening New Markets

Citibank's experience with its aggregation site - which is available free to anyone who has an account at a U.S. financial institution - bears this

Noor throad Manni disector of consumer portals at Citigroup Inc. in New York, wouldn't say how many visitors are using Citibank's portal. However, he said thousands are signing up to use the service each week. "The rate of uptake is much higher than we expected," he said.

Even though it isn't generating any revenue from the site, Citibank plans to use MyCiticom to cross-sell mutual funds and other products to its existing customers and market those services to ooncustomers, said

Like Chase, Citibank decided to go with Yodlee for its account aggregation. Yodlee uses a combination of screen-scraping technology and direct links to aggregate data from L500 banks, brokerages, billers, rerail sites and e-mail services Analysts said none of the

major banks has decided to build an equivalent system on its own because it's been more cost-effective for banks to hire vendors like Yodlee to build and manage the technology.



Small-scale UPS quality that makes you say, "Wow."

A pricetag that makes you say, "How?"

PowerSure Direct

A Classic Makeover

Talhots' sizable IT investments are aimed at helping the women's clothing retailer step out with even bigger long-term profits. By Carol Sliwa

RETURN TO ITS | tomer service system. classic roots has made The Talhors Inc. one of the hottest retailers in the country. And fashionable upgrades to its core business-management systems are expected to help the wowho recruits temporary help at men's apparel chain squeeze

out more profits. The 53-year-old retailer has rebounded from a disastrous 1997, when it experimented with trendier styles in an unsuccessful attempt to attract nger buyers. Hingham, Mass-based Taibots is now on track to achieve record sales and earnings and is forging ahead with plans to increase its number of stores from 686 to ore than 1,100 by 2005.

nized that to execute those pitious plans, they couldn't cling to the mainframe-based systems and homegrown applications that had been running the business for more than two decades. So they boosted the tion technology budget 30.5% in 1998 and another 21.8% last year to invest in leading-edge technologies.

So far, those investments have included the following: A merchandise planning system from JDA Software Group Inc. in Scottsdale, Ariz., that's more flexible and allows for more detailed analysis than Talbots' old spreadsheet-based

#PC-hased noint-of-sale term nals from IBM that will let Talbots develop more customer oriented services.

erce site built on Microsoft Corp. technology: A Web-based replenishmen

The new customer service system is faster and has more features than the previous system, say early users. "If you're trying to find other things to go with (an article of clothing), it's great," says lennifer Lambert,

"Two wars ago, we were a 100% mainframe-based shop. Today, somewhere between 50% and 60% of our functionality comes from the mainframe," says Randy Richardson, who joined Talbots two years ago as senior vice presi-

dent of information services. Retailers have traditionally been slow to scoop up new technology, and for some, "it's perfectly acceptable to leave in 30-year-old systems and build

Suleski, an analyst at AMR Research Inc. in Boston, But Talbote' extransion provided a prime opportunity to adopt new technology and address its needs for "more robust and scalable systems," she adds.

"Prior to their bad year, they were really successful because they read the fashion [trends] correctly for their type of customers. Quite frankly, they could live on less-than-adequate IT infrastructure because they got the fashion part of it right," says Brian Hume. president of Martec Interna tional Inc., a retail consultancy

But enine forward. IT should play an important role and impact the bottom line. Hume predicts. For instance, Talbots' merchandise planning system



uations and lost potential sales. and its new data warehouse from Reselving in Minnespolis will bring critical customer trend analysis. Supply-chain

management will also be key. "You have to reckon about two years before you see any real paybacks from any of these projects," Hume notes.

Talbots found itself falling behind some prominent tech nology-savvy retailers, such as The Limited Inc. in Colum Ohio, and The Gap Inc. in San Francisco according to Hume Basically, if you're that far behind, you've got to do something very fast," he says. "It's not a case of catching up. You've almost got to leapfrog

Finding the Right Fit While retailers have increas-

ingly turned to technology to stay competitive, Richard has no illusions about IT's impact on Talbots' success. His 17 years of experience with retailers, including 10 years at The Limited and four years as CIO at Ann Taylor Stores Corp. in New York, have shown him that IT "typically adds only a little bit to the [financial] nicture, and profits rise because the merchandise is clicking," he says

"Unlike a hard-goods retailer, there is so much art associ-ated with this business." Richardson says. "What IT allows you to do is exploit the ups, and [it] gives you a safety net for the downs.

Laying the foundation for the day when they would play a greater role in exploiting the ups, Richardson and his troop recognized that technology was only one piece of the puzzle. The tougher job was change the culture of a largely Tampa. Fla-based IT staff that had grown distant from business colleagues up north. The IT staff also lacked the procedural discipline to pull off the rapidfire development projects it now regularly delivers.

"When Randy came in here, I can remember he sat down with the three of us, and one of his first questions was, 'What projects are you working on?" And we couldn't answer that question," says Jon Wendell, a 16-year Talbots veteran who is director of the Tampa data center and reports directly to Richardson, along with Carol Hewitt, director of application systems development.

"We had multiple din

AT A GLANCE Loosening The Belt

As Tolbots rebounded after 1997, it numbed more capital investment into its IT operations.

Sales: \$981M

Income: \$62.68 Capital spending on IT: S1M

Sales: S1E

come: \$63.6M Capital spending on IT: S1M

Sales: \$1.10

COM: 36.6H Capital spending on IT: \$4M

Sales, \$1.10 Income: \$36.7M

urital scending on IT. S&A

des: \$1.38 Capital spending on IT: \$10M

within applications and son times even within the applications group. We wouldn't doing vs. the catalog side. They could be working on projects, and we could be duplicating our effort over here," recalis Hewitt, a 12-year vetera But that has all changed.

Richardson brought in a so phisticated project-management system and promoted a more disciplined, collab approach. He also encouraged IT staffers to use videoconferencing to bridge the gap with Hingham-based staffers and asked them to log more air miles to be closer to end users. Since he flies every week

ending two days in Hingham

and three in Tampa, Richardson says be figures no one can complain about travel. He says he wants his 130-person IT staff to think of itself as a business unit rather than as a technology unit. "We're approaching it from a business perspective first,* he

says, "and supporting that per-

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BUSINESSOPINION

WORKSTYLES

What's It Like to Work at . . . FSPN.com

ent of technology mr. ESPN.com tion: The ESPN En technology for the dol-com rade) in it Seetlie, and the volto nal and content staff is in Bristol. Core. The main IT group for ESPNEs rable network is also in

Number of IT emp In the cance of ISO. er at employees (e alt information not avoid able due to policy set by parent by The Wat Dinney Co. com has a lot on its

s - a new e-commerce with Bezwerton, Ors. coverage con

ture things are working - esc cally if it's a leature integrated with the broadcast side. On ang day of the football see on, overyone is in the office.

is this a peak time of year or is it always this busy? s - the launch of the tw ns and the NCAS of connades with the h of the banetad season. lay: "About 12 hours. ton8am to8pm e on deadline. It's driven

get paged." so you're part of a larg

Internet Group Tormerly Go Networks], which last Novemher was issued as a surparate tracking stock from Disney Any anxiety about the dot-com demise? "Being a leader in the sports calegory and being part of the Dispey (amily I think the investment at a jet of det come

ning projects: "We'll be ng some big enhancements to the carrected applications adding multimeds, streaming wien interactivity maybe an inand real-time notification that aierts you when someone hits a home our. Wireless is also a big initiative now - to extend our content and gamecasts to the weriess base Scores are already available on weeless but you'll be able to make for tasy football trades, and s garracast applications will be

IT career paths: "We have two tracks - management or a more technical path, where you can become a principal o enior engineer. The unique thing been in that as you move ough management, you get ed in other media arres that ESPN touches, like broad cast planning or magazine orang. It's very unique to have a software background and be in a brainstrement

meeting about how a TV show might work urity bad ed to get into the building or office? Yes. "We're in the Smith Tower, a turn-of-thecentury building that actually has elevator operators. So you have to show your bedge to get ice mascet: Rodney

one of the guys who works here. We call him The Bull. 's the guy who pians all of our internal events. Ike Friday affermoon beer parties."
Would simpleyees feel of fertable e-mailing the CEOT "They'd be cominted e-mailing the general manage of ESPN.com or the CEO of CIG. but I don't know how con

- Lesie Gott

ED YOURDON

The 'light' touch

AST MONTH'S COLUMN on managing e-business projects provoked many e-mail queries from readers who asked if I could provide examples and additional details about socalled light project management methodologies. Perhaps the most popular today is XP, as explained by Kent Beck

in his book eXtreme Programming eXplained (Addison-Wesley, 2000). Another is "adaptive software development," explained by lames Highsmith in a book by the same name (Dorset House, 1999)

Most of the ideas behind light methodologies sear's near indeed Dater DeGreen and Leelie Hulet Stahl summarized many of the basic ideas in a wonderful book. Wicked Problems, Righteous Solutions: A Catalog of Modern Software Engineering Paradiems (Prentice Hall, 1990). While the emphasis in the '90s was on the iterative or "spiral" nature of these methodologies, the light characteristic involves something else. As University of Colorado Prof. Al Davis, who specializes in software requirements analysis, nuts it, it really means "just enough."

too little discipline and rigor runs the risk of delivering the wrong system and being late and over budget. But a methodology hurdened with too much detail, formality and bureaucracy risks becoming paralyzed in the face of rapid changes that take place during development. Neither extreme

is practical today. Thus, light methodologies proresent a risk/reward approach to investing time, money and resources in the various phases and activities associated with systems development. How much is too much - or too little - requirements analysis? How much is too much formality and rigor in architectural design. code walk-throughs, testing and all the other familiar activities associated with software engineering? And how much is too much when it comes to time reporting, progress reporting, status meetings and the other familiar activities as

sociated with managing a project? The issues and questions have been with us since the beginning of the software industry. but the answers and strategies must be reexamined at least every few years, because the cost/benefit parameters change as business conditions, technology and our software devel opers change. For example, the choice between too much and too little rigor is likely to be affected by corporate time-to-market pressure. Is that pressure higher or lower than it was a decade ago, and are the penalties for not being first to market higher or lower? And employee turnover is a factor. One reason for having a formal software development process is that such a detailed document describing the requirements, design and code will make a proj

ect less chaotic if developers out in the middle of it. Is that more or less likely to occur today? As I discussed in my July column, "Rethinking Basics," the light methodologies also ask us to re-examine our assumptions about investing resources in requirements analysis - where the defects have traditionally been the most difficult and expensive to fix - and assumptions about investing resources in process improvement in

> design-level or code-level defect with a faulty process. Again, the answer isn't likely to be an extreme of bureaucratic overkill or rampant anarchy but just enough rigor and discipline to provide a cost-effec-

tive benefit The popular light methodologies are also reintroducing collaboration among developers. In some cases. It takes the form of powerful proupware tools; in other cases, such as with XP, it even leads to "pair programming," in which two developers work together on a single design or coding assignment.

This practice faded away a decade ago, when falling hardware costs made it cost-effective to give every developer his own development tools. But today, pair programming can lead to higher-quality systems and reduce the time spent testing and debugging. Any IT organization involved

in high-pressure, short-schedule e-business development projects eds to investigate light methodologies. At their core, they represent simple com sense. But as humorist Will Rogers once remarked. "Common sense isn't common." P

Yourdon is editor of Cutter IT Journal, published by Cutter Consortium in Arlington, Mass. Contact him at www.yourdon.com.











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NETWORKS

continuous de Marie Separat los colonis en reciencia el fond limente. Med de por arrei de misma le la como mois d'acces descrito d'acces de la colonis de la colonista della colonista de la colonista della colonista de la colonista de la colonista de la colonista del colonista della colonista de la colonista della colonista della

JEEN JEM MELLER Was looking for some leadership training years ago, his human resources department suggested Otto Knoeger Associates in Fairfax, Vz., which had a reputation for development courses

Va. water man a replanton to development toutselved based on the Myers-Briggs Type Indicator. He says he caught up with Onto Knoeper after one of his classes, charted a few minutes and was astonished when Knoeper asked him. "If your bouse has a light with switches in more than one spot, when you're leaving the house, do you ever go back to TOPE

bouse, do you ever go back to
be sure not only that they're
off but that both are in the
down position as well?"

down position as well?"
"Yes," Miller replied. "Twe climbed a flight of stairs to do that on becasion."

"Then you could probably get something out of my course," Knoger said.

That was Miller's first inkling that he might be a bit of a control freak. "It's amazing when someone can hold up a mirror like that to yourself, even if the truth is painful," laughs Miller, who has loosened up considerably and is currently vice president and ClO ar Cerner Corp., a maker of health care systems in Kansas Ciry, Mo. In Miller's case, the pain led to gain.

"Up until that point, my idea of managing was iII could get everyone to do it the way I did it, life would be really good." Miller recalls. "With Otto, the lighthulo went on: Not everyone loaded at life and work and motivation the way! do. I ought to spend energy on understanding what will turn my

TOP EXECUTIVE
EDUCATION PROGRAMS

shading what will turn my people off and on rather than forcing people into things that don't fit."

Discovering educational experiences like the one

Discovering educational experiences like the one Miller had is a CIO's dream. But there are plenty of nightmares to be had. In an effort to take some of the guesswork out of the quest, Conguterworld surveyed 410 information technology leaders about what sings and what doesn't in executive education.

When it comes to executive education programs, IT managers look for colleges, conferences and consultants that offer training and insights they can put to work immediately. By Kathleen Melymuka

Leaders at Leadership

IT leaders want up-to-the-minute information that they can use right away, and most like to get it informally at conferences and meetings of associations. The found them to be the most useful because they provide more state-of-the-art information," says Emily Gallup Fayen, who handles globalization at RoweCom Inc., a bassiness-to-basiness service provider in Cambridge, Mass. "The presentations are untailly by people actually working in the field where the letter things are

actually working in the field where the latest things an happening. And especially in Internet commerce, it's all changing so fast that talking to people is almost the only way to find our what's happening now." Huge symposia have their place, respondents say, as long as your expectations are realistic.

"I get a lot out of walking around Comdex," says Lawrence Mann, support services manager at Georgia Gulf Corp. in Baton Rouge, La. "If you go to try to locate the proper network card, you'll go crazy. But you can just get exposed to a lot of stuff and get the

pulse of what's going on."

He says he attends Stamford, Conn.-based Garter

Group Inc.'s Symposium/TTxpo for the same reason.

Others find the usefulness of conferences inversely proportional to their sizes. "If you've got L000 people in an auditorium, I get very little out of that," Miller says. "Usually, you'll get as much if you read a

book."

In contrast, Miller says he found an AT&T Corp.
e executive development conference for about 30

executive development conference for about 30 CIOs very useful.

"They brought in speakers from around the industry and academia and tried to test the group's ability to get

out of the box." Miller says. Most important, he says, is that participants can talk to presenters at breaks and meals, "so you can take the content of the session and dive down into it."

Til Raders stress that only part of the educational experience of a conference takes place at presentations. The rest happens "between the cracks," in the hallways, burs, restaurants, parties, vendor receptions and even bathrooms. Managers can help their Continued on page 48

Executive Education Trends At a Glance

E Conferences are a primary resource, Information technology expositives are more enclined to sand their staff to conferences for executive education, followed by professional association, page area offered by professional association, page area offered by professional association, page area offered by professional association.

Conferences have high corporate value. It terms of efficiences, [7] texcutives relicated that conferences (30%) and professional associations (24%) were most effective in helping them achieve their companies checkines, followed by graduate school excurse advantage recovers (25%) and rectinamed contacts.

Ill Management skills are in highest demand. When asked what types of programs DOs sent their staff to most offen, the responses were management (25%), leadership (22%), communication (14%) and

Cost ranks high in making a selection. The next important factors in selecting an executive education minorizing were cost length of emporary and level of

B One week to an ideal length of time for training. When solved with they considered to be a "memorable" arran of class time for an executive ducation program, 55% said free to five business days, and 15% said fewer than three business days. Sin percent inducted that se to 10 burness days was acceptable, and "Pe said to 26 days, Chry 4% said that may film 25 burness days was coopsible.

Westends are fair game for training. Fifty even percent of survey respondents said they sent laff to programs on both weekend and business days, hile 47% said they sent workers on business days only

E A reasonable expectation for investment \$4,200. On average, respondents indicated that \$4,95 eas a reasonable cost for a five-day assoults and other preferant.

a On-the-job performance is the best measure of success. When solid how they measure the effectiveness of a program, if securities lequesty cited how a student applies what he learns to his job, reinstein of the information from the program and the machine same in the denatural overall.

a Internet training is used but with spotty success. Apprentially 54% of our surey base said the companies participated in lettered or wide huming. Of the 201 respondents who had used internet training, roughly 47% said they were satisfied or erterney satisfied. 44% said they were convented additional and 41% owner commental or not all all satisfies.

a Video truining also gets mixed marks. When axied how satisfied they were with video transing. 42% of the 20th said they were satisfied or entermity satisfied, and 40% indicated that they were somewhat satisfied. Sowethers proof and they were somewhat satisfied. Sowethers arenot said they were somewhat desatisfied or not at all satisfied.



TOP EXECUTIVE **EDUCATION PROGRAMS**

Continued from page 47 reports get the most out of conferences by assuring them up front that socializing is an intrinsic and valuable part of the experience and isn't consulered "goofing off,"

The more the conference attendees hang out with peers, the more they learn," says Cathy Hotka, vice presi dent of IT at the National Retail Federation in Washington. "Your nightmare as a CIO is to send your people to a conference and have them eat dinner in their rooms."

Among professi espondents praised the Information Management Forum as a place to meet and network with clients and competitors and hear about upcoming technologies and how they mucht be mend

IT leaders also had good things to say about short-term, university-based leadership courses from Harvard University. Stanford University, the University of California at Los Angeles and the University of Virginia, among others. They praised their realityhased case studies, close alignment with current issues, presenters with

real-world experience interaction with peers and action-oriented lessons Leadership and management educa-Continued on page 50



Executive Education: Made to Order

HE MOST EFFECTIVE executive education programs mized to a business's merce program Price-

aterbouseCoopers developed with the top-rated Darden Graduate School of Business Administration is a powerful example of bow customized execu tive education can have a substantial

Last year, the company sent 3,000 executives back to school for an elecnic-business education curriculum By this year, the world's largest professional services firm had become one of the most sought-after management

consultants for e-business strategy. "We used executive education to on at PricewaterhouseCoopers," says Jim Sheegog, global leader of executive

on development in Florham Park, N.J. The information we rolled out to executions wouldwide has quickly taken root in the firm and is showing up in new products cur

rently being developed and launched." To deliver this type of large-scale up-to-date learning, the financial services firm partnered with the Durden Graduate School at the University of Virginia in Charlottesville. The partrship's goal was to create a customized program specific to Pricewa-

terhouseCoopers' needs. The New York-based company wanted to create a widespread awareness of e-commerce among its executives and

give them access to the most up-to-date learning on the topic. The curriculum was based on actual case studies and included sessions about online retail business models, manufacturing on the Web, online auctions and bids, Internet security and navment systems and Web metrics.

Darden is consistently ranked as one of the top business schools for its traditional MBA program. It's also renowned for its top-noteb open enrollment and custom-designed executive education offerings.

*Darden is the second-largest writer of business cases in the world; the first is Harvard," says Dr. Brandt Allen, Darden's dean of executive education. "We hire faculty and promote them based in part on their special skills aimed at teaching executives and for their research directed at practicing managers rather than academics."

For those reasons, Priorwaterhouse, Coopers had already established a relationship with the school. When the global firm decided to offer an executive education course on e-business.

Darden was the logical partner The first step was to create a team of component and academic members to

staff the initiative, Next, Darden professors conducted research and wrote case studies of companies that were involved in e-commerce. Then they wrote curriculum for a three-day immersion into e-business

The material was organized into modules for instructor-led classes of about 60 participants in each session. The course included breakouts for small groups that would review and analyze the case studies and lecture content, devise solutions and return to

the classroom to make presentation PricewaterhouseCoopers employees contributed real-life experiences and access to clients and worked with Dar den on the logistics of bringing 1,000 executives to the Chariottesville, Va. campus in June and August last year. Not all PricewaterhouseCoopers executives traveled to Darden for the course. In a unique arrangement, Dar-den permitted five other international

hy famous business schools to present

another 2,000 executives around the

The consortium of schools included the London Business School, INSEAD (the European Institute of Business Administration), located just outside of Paris, the University of Melbourne in Australia. Carnerie Mellon University in Pittsburgh and the University of California at Los Angeles. According to Sheegog, the schools adapted the Darden curriculum and case studies to regional specifics to make the content

mmediate Application

"A participant in an executive MBA program is amassing knowledge for later application, whereas our execu tives were applying the learning imme diately while working with clients, even as the course was going on," says Ed Berryman, director of e-business solutions at PricewaterhouseCoopers. who assisted in creating the course. Course participants delved into case







studies on organizations such as Dell Computer Corp., Value America Inc. and Progressive Casualty Insurance Co., examining how they use the Internet in their businesses.

net in their businesses.
During the session be attended, Len
Steinmetz, a former technology leader
for learning and education at PricewaterhouseCoopers who was recently
promoted to I'l management electron-

ic-business practice leader, says the "trusty cell phones didn't stop ringing." For executives who spend most of their waking hours at clients' locations, "the course was a significant amount of time to invest, but there is no fluff in it whatsoever, and it added significant

value to everyone's portfolin of ideas." Steinmetz adds.

The best part was the "intense" case studies, presented as games and played by teams of participants, he says. Steinmetz says he enjoyed the competition (his team won) and the 'hands-on application of the learning right in the

The course is moving us to the forefront of the marketplace and helping create a common

language.

ED BERRYMAN, DIRECTOR OF
E-BUSINESS SOLUTIONS.
PRICEMATERHOUSECOOPERS

Clearly, attendees consider it time well spent. "We've seen a major acceleration of winning oew e-business," says Berryman. The course is moving us to the forefront of the marketplace and helping create a common language at Pricewaterhouse/Concers."

"The course achieved three objectives," says Stimmers. "It raised the level of swareness of e-business ories taxion for all new projects and their strategic direction. It provided business models for the new e-world. And the case studies helped us develop a depth of understanding about bow firms have adapted or not adapted, which here parected the product of the state of the stat

and give us a good additional basis for advissing our clients."

According to Berryman, the course give executives the rare opportunity to interact with their counterparts across different lines of business, such as unditors, tax accountaints and management consultants. To share perspectives about e-business opportunities."

In addition, a cybercale gave enecutives and Darden students the chance to meet, share information about curreot projects and scope out new talen for the firm. Based on the ratings of the participants, "this is the most well regarded course offered in record memore." Berryman says.

memory, perryman anys.

Executives who come to Durden for open enrollment courses are those who "take responsibility for their own personal development," says Allen.

"The most successful IT people are the ones who have the best business

Vitieilo is o freelance writer in East Brunswick, N.I.

Reader Recommendations

The following am a five sources for executive solutions that IT ensurges to big it they have intended on set affects but and which they recommend it all cases, these are programs, obtained content or conferences that IT ensurges coled for their one of each world examples in their concellent for provided controls and management training that can be manifestable participated in the light of the provided concellent addition to result only with their before IT enables or executive or committees to be later.

Colleges and University Programs

Exerction, III.
swee kellings near adultenc_edu/indec.

Britain School of Business Administration Boston

s MITT Storn School of Management Combridge, Mass.

http://relation.mi.edu/encord/min.fr a University of Michigan

Ann Artor, Mich. http://execut los.umch.ed.

Stanford, Calif.
seem gob.stanford adulated

B Georgia Institute of Technolo DePres College of Management Admia

DeVey Inettute of Vechnolog
Kaller Graduate School of Manageme
Celtrook Terrace, II.

sees Jailer adultor strr

Events, Associations and Organizations

Provider 100 IT Landers
Confessional

trammighen, Micol.
www.computerworld.com/premier/80/
No, this lant ha ratientpl at pheneless selfpromotion. Several 17 menagers recommend ad Computerworld's lind Premier 100 IT Leaders Conference as highly valuable. Next year's event will be held May 20-20 in Rend-

secutive Startner Symposium Expo sey have Gartner Group Inc. Startlord, Corn.

Stamford, Conn. www.refo-edge.com/sym99/ntm This year's event was held in April in Sen Dego. Details on next year's event are still

> s Information Managem Forum

wave informationum.com
Offers a series of conferences for IT executive, including ones on security (Sept. 25 in Atlanta) and knowledge management (Oct. 25-24 in Toronto).

S Educause Washington

www.educases.edu/conference/is/2000/ ragrant.html its year's conference will be held Oct. 10-13 Nashville and is cited as the top conference

for IT feadership issues on college and university campuses.

agament Systems Society (HMSS Olicago www.hirtos.org) Offers educational programs for OIDs and a

Offices educational programs for OIOs and a popular annual conference. The 2001 Annual HMGS Conference will be held Feb. 4-8 in New Orleans.

E American Management Association New York were assent orsinents/tailoond to

www.amaner.org/events/calegend/shin Others an executive roundtable teries, a coporate learning series and conferences and special events.

> B Center for Creative Leadership Greenston, N.C. wee.cd.org/capabilities/aboutcd/stm

Project Management Institute
Newtown Square. Pa.
swee_pracey
Offers a versity of project management Itse

Offers a variety of project menagement training progress and a major project menagement conference, Corrections 2000, which was held earlier this month in Houston.

Effective People
were alread com/growth/bovery index.htm
Whether you need the book, buy the audio
tape or sign up for a class, no single trains
program received such frequent presse fro

BUSINESSSPECIAL REPORT

Finding a Program That's Right For You

onals receive forests' worth es. With so many choices. how do you select the best executive educa-tion program? We asked Turn Burn, vice pris-ident of mortgage systems at Bank Linited ston. Burg oversees the care ent of his staff and attends execu

regram for your IT depart-very week, I get a box les of adveand training programs. There's on not firough that clutter - word of ons from retor. Bank United's CIO.

training programs for the IT stall and me to the [American March

es, we'll look at metrics that led us coeffet if we are able to w effectively IT people com-





Methodology

Computerworld's Executive Education Survey was conducted July 25 through Aug. 3. Our survey was administered online to directors, vice presidents and CIOs in organizations across the U.S. Our survey asked which programs IT executives sent their staff to, what their criteria were for selecting programs, how they measured the effectiveness of a program and which programs were most valuable. A total of 410 IT managers responded to the survey. The organizations surveyed had an average of 8.832 employees.

Continued from page 48 tion is in greatest demand, but Fayen notes that programs fail if they're too general. "I just got back from one for everyone from first-line managers to senior executives," she says, "It's very hard to construct a management training program that will be appropriate to

all of them Among programs focused on leadership training. The Center for Creative Leadership in Greensboro, N.C., got the

nod from many companies for ive, high mulity, content **EDUCATION PROGRAMS** rich programs. Miller says two

of the center's sessions helped him modify his behavior to become a more effective leader. "Their approach is to force you out of your comfort zone to learn about your behaviors, insights, motivation and communication style, with the insent that you learn how to modify your own behavior so you can become a

more effective leader," Miller explains. They show you that you're really dealing with people's emotions in addivine to the content on the table."

This approach was a revelation for Miller. He says that like many IT profestionals, his personal style is heavily skewed toward thinking rather than feeling. Becoming more aware of that has been more pelpful for me in my career than aby consens or skills train-

ing I've ever received," Miller says. Vendors often sponsor educational opportunities, and several respondents sed IBM's sessions for being carefully tailored to specific audiences. with plenty of action items to take

home A user group meeting can comb endor know-how with user network ing for a successful educational oppor unity, says Don Williams, director of

information management at Hutcheson Medical Center in Fort Ogle thorpe, Ga. TOP EXECUTIVE The best thing about

> ings. Williams says, is that they focus on the issues that are keeping CIOs awake. For him, that's the new federal regulations regarding the portahiller of health care insurance and the privacy and security issues they raise One of the things I expect to see at the user group it how we can realist tically deal with these issues,"

Williams says. How to Choose

IT leaders are barraged with pitches for education. Mann winnows them down by comparing opportunities with the gaps in his IT skills assessment database. When an employee attends a session, he adds information about the class and its usefulness into the skills Assubase so that pext time, prospective

______ students can get insights in advance. Many glean information the oldfashioned way. When Miller was look

ing for leadership training, he talked with peers in other IT shot The Center for Creative Leadership came up a half-dozen times, and we got a good feel for it," Miller says. "I

became the guinea pig and went first; then we scheduled 12 more folks over six or eight months." "I look at the agenda," says Bruce Barnes, vice president for technology strategy and planning at Nationwide Mutual Insurance in Columbus, Ohlo "What are they intending to do? How specific is it? I look at the quality of presenters. Do I know them? I also try to assess how experienced they are in

the space where the training is being focused. I want 'been there; got dirty.' I check the list of 'satisfied customers,' and if I know them. I call and say, What do you think?" IT executives measure the effective ness of a program by results. Barnes

takes notes during sessions about where to apply skills or information on the iob. Faven says if she comes away with one useful thing, the training was worth it. She looks for new insights

from employees. Mann says a program was worth it "if it sticks with me. You can get a high off a program, but then a week later you say, 'What can I do with it?' Good ones teach me something I can use."



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6/2000 by Broads Consumerors System. In: All rights married Broads and the Broads logo are registered technolis of Broads Communications System. In set to behalf Sense and Consumerors and a service of the Consumerors. OGC YACHA, A BYTAN WITHAN IN SIZERS
COPY'S information technology department, says being a Latino and an IT professional in the U.S. can be an advantage.

In fact, his ethnik liy is what brought him to Kreus in the first place. The the business world, Hispanical have enough common fies with languages and heritage that it keeps us all together. We have enough common goals, so we can grow together and go forward, "Yacia says to

we have enough common goals, so we can grow to pether and go forward." Yacila says. Although Yacila and many other individual Latinos working in IT have grown in their careers together.

working in IT have grown in their careers together. Hispanics in the U.S. aren't well-represented among IT workers. A few companies seeking technical taleot have

A few companies seeking technical taleot have developed specific programs aimed at Latinon. But if IT is going to take advantage of the fastest-growing, segment of the country's population, more training and recruitment efforts need to be directed toward Hispanics. Xerox established its Hispanic College Linison

Program specifically to bring Hispanic men and women into the company. Yacila, whose family hails from Peru, was the president of the student chapter of the Society of Hispanic Professional Engineers at Polytechnic University in Brooklyn, N.Y.

Yacila had met regularly with Xerox representatives, who recruited heavily on the campus. They circulated his résumé inside the company, and he was

offered a job before graduation.
Yacila has done everything from helping develop computer-aided engineering applications for product designers to deploying databases for the compa ny's Latin American sales division. Now he's working in Xeroc's critical worldwide data center in

Rochester, N.Y.

But Yacila acknowledges that he's a rarity in the profession. Latinos "don't ge; much exposure to technology," he says, and that bursts in drawing their interests. But, he adds, "we have a civil responsibility to reach out to individuals who might need assistance."

Labor Gap Relie

Expanding Latino interest in technology could go a long way toward addressing the shortfall in technical personnel. It could also dramatically reduce the oeed to import IT talent into this country.

Richard Chabran, director of the Center for Virtual Research at the Uolversity of California, Riverside, acknowledges that H-IN visus are necessary for bringing foreign workers to the U.S. now and are important for the economy. "But more importantly, it is in our national interest to train people here. Visus

are a short-term solution," he says.

On the face of it, the need for these visus seems likely to remain for a long time, if IT is to depend solely on higher education to fill the technical talent gap.

ly on higher educations to full the technical tourst gap-The Computer Research Association's most recent Taulhee Survey — which tracks ethnicity among college students anisoring in computer science — shows Hispanics near the bottom among ethnic groups enrolled in computer science or computer engineering course work. The Washington-based association says that early liv to 5% of all students who receive these technical degrees are Hispanic. The annual poil also showed that only liv of computer science faculties

This is a shocking disparity for a segment of the population that includes one of every nine U.S. citizens. According to the U.S. Census, there are more than 32 million Hispanic nonwhite members of society. The Latino population is growing at more than 37% per year, compared with the white majority.

The Latino population is the fastest-gremains the most underrepresented in unlikely to change if we keep looking





owing segment of society, yet it the IT workforce. It's a scenario that's offshore for talent. By Mark Hall

The Many Faces Of the Latino Workforce

Cassiying individuals into a general group is always hought with danger, especially given the cultural diversity among Latinos. According to the U.S. Centess, the Latino workforce (norwhite Hispanic U.S. citizens)

"Nobody has an affirmly about being Lating," no Carlos Mendez, who was vice president services at CommerciaRoute Inc. in ville, Calif., before being promoted to vice resident of business development. Mendez ago that if he were recruiting a Cuban, he would go about it differently than if he were seeking to here a Messcan. "There are cultural differences

we a Microam." There are cultural differences that should be taken into account. The stays Anna Babbook, a systems manager at FPL, quees. "The term Hispanic is like a bon all the fifturest cultura have been put into;" she says, diding that Assers face the same problem. But Hispanic if provisionate both accept the erm and understand that a common language is

m and understand that a common language or e reason they get lamped into a broader cale-ny than their own indirectal backgrounds. Richard Chabrain, devotor of the Center for trul Research at the University of California, verside, says that dwalling on the differences could set back efforts to develop a broader inte-est in fT among Latinos. "We need to get a general message out," he says

is recough out, in a says. While achrowledging "significant cultural ferences," Lounder Sent, manager of information management at FPL, suggests that IT coules not get bogged down in cultural differ What matters the most is not dome-

each to meeting students, according to Claira, in professor of information studies at the neesby of California, Los Angeles, But, Ohu da, it's orthout that universities and large IT progations get to students early in their

bushors.

One suggests visits to high schools and even innerlary schools to talk about what IT is and that IT workers do that's exching. She said into

which is expanding at only 3% per year. By 2005, Latinos will pass African-Americans as the secondmost-populous ethnic group, behind the white

Despite their strength in numbers, according to Bob Pearlman, executive director of San Jose-based Joint Venture: Silicon Valley Network's 21st Century Education Initiative, "Latinos are just not finding their way into the IT scene." He says the workforce gap costs Silicon Valley companies between \$3 bil-lion and \$4 billion because they can't get people to

To the credit of technical recruiters at some co panies, they haven't shied away from seeking techni cal staff directly among Latinos, according to Lat-Pro.com Inc., a Plantation, Fla.-based recruiter for Spanish- and Portuguese-speaking Americans. This year, IT-oriented jobs jumped to 33% of the positions offered through LatPro, compared with 20% last year

Lourdes Sori, manager of infrastructure management at Florida Power & Light Co. (FPL) in Juno Beach, Fla., defies the statistical norm.

Born in Cuba, Sori came to the U.S. as a child in the 1960s. She earned a bachelor's degree in electrical engineering and then worked at Schaumburg. Ill-based Motorola Inc. in wireless telecommunic tions engineering before getting her master's degree and moving to FPL's information management

Sori says IT departments that are seeking Hispan employees need to foster an environment "where people are comfortable with all sorts of people. It's open communication, not just diversity, that counts."

Just more than 28% of FPL's 600 information management department staff are Hispanic, nearly matching the utility company's overall percentage of Hispanic employees, which is 25%. Dennis Klinger, ClO at FPL, says his department

doesn't do anything special to recruit Latinos. But once they are on board, he makes certain that they ors who are primarily based in their techni

cal fields "But we try to find someone they can talk to," Klimeer says, Often, that can be another Latino.

Xerox has taken an activist approach to recrui minorities. In addition to the Hispanic College Lizi-son Program, the company has established internal caucus groups to represent demographic identities

among its employees, including the Hispanic Associ-ation for Professional Advancement (HAPA). The current president of Xerox's HAPA. Jes Arbulu, says. "It's very difficult to find Latinos in IT." Once they are hired at Xerox, however, they can use HAPA to identify mentors both inside and outside their departments to broaden their career opportuni

ties within the company.

Arbulu, a U.S. citizen who was born in Ecuador, is working with a Latino mentor in Xerox's research and development group to deepen her technical knowledge. She says HAPA's primary goal is to develop Hispanic employees knowledge for specific cor-porate business objectives. Given the company's pol-icy to not sponsor H-IBs, this puts significant pres-sure on its caucus groups to attract talent.

George Carranza, a manager at Xerox's office busi ness unit, says the programs are a success, as far as

"My hiring at Xerox is a direct result of the efforts of HAPA." Carranza says, recalling the company's re cruitment activities among technology-savvy Latin students at California State University, Fullerton.



How to Be A Media Star

Look around you — techies are no longer in the shad ows. These days, your former Dungeons & Dragons buddles are showing up on the cover of The New York Times and chatting about their latest projects on CNN.

on CNN.

Technology professionals are fast becoming media stars. But none of your computer science classes tought you have in talk to remotives without being mic-

quoted or how to conduct a TV interview and come out looking more like JFK thon Richard Nizon. William Dr. Friel, senior vice president and CIO at Newark, NJ-based Prudential Insurance Company of transition to the come in III.

America, has seen it oil.

With 40 years in information technology under his belt and regular interviews with the likes of The New York Times. The Wall Street fournal, CBS Network.

News and, of course, Computerworld, Friel has learned some tips along the way. In a recent interview with Computerworld's Melina Submen Friel offers on how CO's con he effec-

Solumen, Friel offers advice on how CIOs can be effective — and visible — spokesmen for their companies.

What have been some pros and cons of working with the media, both personally and organizationally? I think

media, both personally and organizationally? I think as far as working with the media is concerned, that is part of my job. I do enjoy being able to describe what Prudential has done, what impact it's had, how it's helped our customers. ... And I think it helps so retain the best and the brightest in the industry, as well as attract the best and the brightest. And now just the developers: the business partners are reading about us as well, and it's something they feel good about us as well, and it's something they feel good about.

Here do you juggle the need to act as a spokensame with the nead to get your work done? It consider it part of my job... ned I will try to be as accommodating as possible. The most difficults islutation, of course, is when someone has a decadine and they need to have a comment today. If possible, if we can accommodate them, in a subject I hanve very well, to miss some of those opportunities.

Must user pour aufust interviews Har? Twesty-fire, 20 years ago, fele concerned about talking with the press. Was I going to get my message across appropriately? Was I an effective communicator? Was the person doing the interview an effective listener, so that they understood what I was saying and would (that person) convey the message appropriately?

Here you seen a difference in the way you give interviews over the years? Yes. I think first of all, there's the preparatory work that's done by the organization to identify what the reporter is interested in, so that you get a chance to think about it. The more of that's done, the easier it is and I think the more productive it is, both for me as well as for the press. The most difficult kinds of interviews are innerviews where you had no notion of what was on the mind of the interviewer.

hotsely, as has changed is technology sizes you began 40 years upon. How there changes brought short 40 years in the symmetre of the changes of the 40 years in the symmetre of the changes of the years which are presented in the changes of the years of the changes of the changes of the years of the changes of the years of the changes of the changes of the changes of the years of the changes of the changes of the changes of the years of the changes of the changes of the changes of the years of the changes of the changes of the changes of the years of the changes of the changes of the changes of the years of the changes of the changes of the changes of the years of the changes of the changes of the changes of the years of the changes of the changes of the changes of the changes of the years of the changes of the changes of the changes of the changes of the years of the changes of the changes of the changes of the changes of the years of the changes of the

When I first started in computing in 1900, computing was primarily a back-office kind of activity, Now... It's involved in directly toaching the customer and understanding the customer... So, if squite a different world, and it's a beck of a lot more interesting world. It's a much broader, more complex set of questions and areas that are being covered, and in that sense, it's more demanding.

see you new committed any sorkous bhassies in an intervient? We make it a policy and it's sust good, common senie not to talk nepatively about products and services offered in the marketplace. And when once or twice that has happened, four public relations staff or II would jump in and say, "We don't expect to see that in the interview because that wasn't the purpose."... We've not interested in casting stones: at other popple's

Have you learned any tips to ensure you get your message across? I would tend to be as honest and open as

products or services

Hen you ner had a conversation with a reporter without realizing you were not me more? No, because overside of thoise times as I said eastler where I've made a blunder or no. I try to stay away from that. It's kind of a result of the media education. We don't really expect to be off the record. And I never would offer. "Hey I'm poing to give you this, but it's no for attribution, so you can do with it what you want." I don't operate that way.

hat an some of the trees occored in Proteintie's media tashing for amployees? An understanding of what drives the interviewer and what the role of a reporter is and what the role as a spokenma of Prudestial is. "Wey often, it's quite different than just having a conversation with somebody on the street corner or in your office. And there just needs to be a heightened awareness and recognition of that."

WHO IS HE?

William D. Friel, 61, joined Prudential Insurance Company of America in 1988

as vice president of information systems and was tapped to become the company's first CIO in 1995

Friel has 40 years of information technology experience under his belt, having worked at Automatic Data Process-

ing Inc. and J. C. Penney before joining Prudential. Within the past year, he was named by Network World as one of the "25 Most Powerful

People in Networking" and described as one of the most successful CIOs in the insurance industry by Insurance and Technology Magazine.

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Online Profiling

DEFINITION

Online profiling involves collecting and analyzing customer Web site data - information that can be used to personalize and customize an end user's Web experience. Network advertisers use online profiles to track end users across multiple Web sites. The practice is controversial and may ultimately be subject to federal regulation.

at International Data Corp. in CARDINAL BULE Framingham, Mass. Online profiling begins on for any successful business is to "know your customer. In e-comerce, a key way for companies to get information about their customers is through on-

Online profiling data, which is information gleaned from a omer's use of a Web site, can be used to target advertisements, personalize Web sites and match services to a specifmer's needs.

But the practice of online profiling has come under innse scrutiny. Many lawmak ers and privacy advocates say they're concerned that online profiling can be used to learn a customer's political and relious views, sexual orientation or medical conditions - inforution that can be sold and

In short, online profiling embodies both the promise and the perils of e-commerce. But, analysts say, one thing is certain: The practice is indis-pensable to any Web business.

Knew Your Casts

You have to do it if you are online business. It's the crit-

the bost computer - the Web site being visited - places a "cookie" on the end user's computer. The cookie, which is a unique identifier, then transmits information back to the host computer. This information allows a business to track an end user's page views, the length and time of the visit and responses to advertisements. Purchases and search terms entered by the end user can

also be tracked. Companies can develop sophisticated profiles of their end users through personalization

This information can help customers use their time efficiently. For instance, officials at Saleoutlet.com Inc. say they know that the average visitor spends about nine minutes at

the company's Web site. "But is that nine minu spent looking, getting frustrated, or is that nine minutes spent looking for things that they want to buy and research?" asks Michael Aronowitz, president of the New York-based

Saleoutlet.com uses pers alization software developed

is rained through an analysis of clickstream data combined with demographic and psychographic data, which looks at the behavior of other end

This data can be used to anticinate a customer's actions For instance, if it looks like a customer may abandon a shopping cart because of the particularly high shipping cost of a product, and if other customers have shown a pattern of doing the same thing with the same product, the Web site may provide an incentive, such as a discount, to buy the item.

Proceed With Caution

Experts advise businesses to be up front with their customers about their online profilling practices. The best thing you can do is build trust with your cus-

tomers - tell them what you are doing with the information and why, and don't sell or trade information and try not to how information," says Eric Schmi an analyst at Formester Research Inc. in Cambridge, Mass. The practice of online profiling becomes particularly controversial when end users

are tracked over multiple Web sites by network advertisers. A banner advertiseme when downloaded from a network advertiser's server, places a cookie on an end user's comnuter. That user can then be tracked across Web sites that have agreements with the net-

work advertisers. The Web-browsing data is anonymous as long as the network advertiser doesn't link it with personally identifiable in-Privacy advocates say they fear that if advertisers begin

doing that, not only could companies develop profiles of customers' Web-browsing habits, but the data could also be coupled with off-line databases, such as credit and court records or employment histories.

ical element for evaluating the effectiveness of your site," says an airc. to dynamically change to public backlash if they link Chris Christiansen, an analyst

habits, as industry leader Dou bleClick Inc. found out. Last March, the New York-based company dropped its plans to link people with Web-browsing habits after receiving con-

siderable public criticism Network advertisers can develop customer profiles by collecting anonymous data that may also include some basic information, such as the sex and are of an end user. This information can be acquired through agreements between network advertisers and online

If the advertiser has information about a group of Web site visitors, such as their sexes and ages, they can apply statis-tical sampling techniques to

hrowsing data. But some observers, such as Jordan Rosner, director of new media marketing at Pfizer Pharmaceuticals Group in New York, say they wonder if online network-advertising profiling data can really deliver good

"When you really get into a good conversation [with network advertisers), you realize that they only know a small amount of information" about their Web audience, says Rosner. A lot of information that's

The best thing you can do is build trust with vour customers tell them

what you are doing. ERIC SCHWITT, ANALYST. FORRESTER RESEARCE INC.

used to compile profiles "is just statistical projections, and it's not really based on hard facts or data about individuals," he says. The pressure is on for better online profiling data that busi-

nesses can use in targeting advertisements and servine customers. Without personally identifiable information, companies can't respond to individual customers who visit their Web sites.

"It's as if someone is standing in front of you with a paper bag over their head," says Schmitt D

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iog things easier for every-

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ter Ben's re-entrance, we got

an immediate concession of

There are two great poin

10% off the rock-bottom

price quoted before."

IOE AUER/DRIVING THE DEAL

'Good cop, bad cop' brings customer justice

N E-MAIL FROM Tokyo told me about a negotiations tactic we use frequently in the West and about how effective it can be in the Far East - even in seemingly hopeless situations.

First, some background. Two customer procuremeot professionals, Peter and Ben, had beard me speak in Tokyo at a "How to Do Better Deals" seminar the day before they met with a software supplier. The customer's and user himself told supplier's sales director was that he needed the software. (Ouch.) The end user also told Peter and Rea that the vendor wasn't ening to budge oo price, that the deal was essentially done and that he had told the vendor it just had to go through the motions with the procurement department. (Wow, what a challenge for the procurement guys.) Here's bow Peter de-

scribed his and Beo's winning strategy:

"Bee played 'bad cop'; I played 'good cop' and was able to give a sympathetic ear to the supplier when Ben walked out of the room seeming real upset at the vendor's lack of give-andtake. We heard a stroog 'no' to our price discount request. We were told to 'take it or leave it' as well.

in this story. The first I've addressed before in this col-"The vendor played like he was throwing us a booe umn: All of a customer's when he finally offered a 5% stakeholders must be on the discount. Beo insisted oo same team. Everyone must 15% (aiming for 10%). The be aware that negotiations wender acted like he wasn't begin from the moment a used to this and appeared vendor first talks to an inextremely uncomfortable. formation technology user. Beo left the room for a cootinuing all the way breather while I talked through to the ink drying oo about the model of give-andthe contract and through the duration of the contract, untake and partnership we're til it expires. Negotiations

used to in dealing with our vendors, using a very con-

have any contact with vendors is crucial to getting a better deal and then managing the deal better.

The second point in this story is hearing the word

I have often said that unless you have

heard it several times from a vendor, you're not asking for enough - and you're leaving something or the table for sure. Peter and

Ben once again proved that even a "take it or leave it" statement from a vendor isn't always the final SPERMY -- CONC. cially with these two "coos" do

ing their thing on the hest in Tokyo

The Alligator Strategy Dave, an estremed colleague, just returned from vacation and reported that he speot his time off fishing, relaxing and watching birds and alliestors.

Dave said: "Every day I'd see the same 10-foot alligator lying on the bank or in

meet is a very powerful the water at the edge of the tool "

lake. He'd pick his spot, lie there and wait - and observe. Suddenly, in a flurry of activity, a bird would disappear. The gator always waited uotil the precise moment he knew he could make the kill. He never

missed." Dave went one "It dawned on me that the alligator's strategy is very useful when neu tiating. He was calm. persisten and waited for the right moment, and when he made his poiot, it was per fectly clear (espe

cially to the bird) I've believed for a long time that these traits are re guired to be a successful negotiator. "Successful ne gotiations require

that you never lose patience pick your spot, wait and observe, stay focused on successful resolution of issues and always make your point perfectly clear to avoid mis communication. Of course it's not recommended that you 'kill' your opponent, but clear and effective communication at the right mo

US6 Turns to ASP for Expense Tracking Survey: Security No. 1 E-Business Priority gies Inc.'s he SNAPSHOT Team for Production

training for all staffers who

line profiling

they're concerned that online

shared in a networked world.

embodies both the promise

and the perils of e-commerce.

But, analysts say, one thing is

certain: The peactice is indis-

pensable to any Web business.

You have to do it if you are

an online business. It's the crit-

ical element for evaluating the

effectiveness of your site," says

Chris Christiansen, an analyst

Know Your Castomer

In short, online profiling

BUSINESS

ESS CONCEPTS IN BRIEF

Online Profiling

Online profiling involves collecting and analyzing customer Web site data - information that can be used to personalize and customize an end user's Web experience. Network advertisers use online profiles to track end users across multiple Web sites. The practice is controversial and may ultimately be subject to federal regulation.

> CARDINAL RITE Framingham, Mass. Online profiling begins once for any success ful business is to the last computer - the Web site being visited - places a *knew your cuswater In e-com-'cookie' on the end mer's

merce a key ten for compacomputer. The consist, which is mes to get information about a unsure identifier then truntheir customers is through onhost computer. This informa-Online profiling data, which tion allows a business to track is information alcaned from a an end user's page views, the customer's use of a Web site. length and time of the yest and can be used to taget advertise responses to adventisements. ments, personalize Web sites and match services to a specifentered by the end user can ic customer's needs.

But the practice of online phisticated profiles of their end profiling has come under interror scrutiny. Many lawmakmers though personalization ery and privacy advocates say

This information can help profiling can be used to learn a customers use their time efficustomer's political and reliciently. Far instance officials at Salcoutlet.com Inc. say they or medical conditions - inforknow that the surror visitor mation that can be sold and spends about nine minutes at the company's Website

"But is that nine minutes spent looking, getting frustrated or is that nine minutes spent looking for things that they want to buy and research?" asks Michael Aromon itz president of the New York-based

Salesutlet.com uses pyroonalization software developed by Wellesley, Mass, based Manna Inc. to dynamically change content based on information

elicloticam data combined with demographs, and packs starla data ubah losks at the behavior of other end

This data can be used to an tregule a construct's activity For instance it it books blec a assomer mas abandon a shop pings art because of the partie ularly buch shirtwise cost of a realist, and if other crepomers have shown a pattern of done the same thrue with the same product, the Web sate man provide an incentive such

as a discount, to buy the nem. Proceed With Caution Experts advise businesses to

be up front with their cutomers about their online pro-The best thing you can do is

build trust with your customers - tell them what you are doing with the information and who, and don't well or trade information and try not to buy information," says Frac Schmitt, witch Inc in Cambridge Mass. The practice of online profilme becomes particularly controversal when end users my tracked once multiple Web stock network abortises

A banner advertisement, work adventure's server places condicion mendiner's computer. That user can then be tracked across Web sites that have agreements with the net-

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Self-Regulated Profiling

THE WAS DROWNERS THE DEAL

'Good cop, bad cop' brings customer justice

N E-MAIL FROM Tokyo told me about a negotiations tactic we use frequently in the West and about how effective it can be in the Far East - even in seemingly hopeless situations.

First some background. "Ben played bad cop; I played 'good cop' and was Two customer procurement professionals, Peter able to give a sympathetic car to the supplier when and Ben, had heard me speak in Tokyo at a "How to Ben walked out of the room Do Better Deals" seminar seeming real upset at the the day before they met with vendor's lack of give-anda software supplier. The custake. We heard a strong 'no' to our price discount retomer's end user himself told supplier's sales director agest. We were told to 'take was that he needed the softit or leave it as well. "The vendor played like ware. (Ouch.) The end user also told Peter and Ben that he was throwing us a bone the vendor wasn't going to when he finally offered a 5% budge on price, that the deal discount Ben insisted on was essentially done and 19% (aiming for 10%). The that he had told the vendor vendor acted like he wasn't it just had to go through the used to this and appeared motions with the procureextremely uncomfortable Ben left the morn for a ment department. (Wow.

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There are two great points in this story. The first I've addressed before in this columm All of a contomor's stakeholders must be on the same total Everyone most he aware that negotiations begin from the moment a vendor first talks to an information technology user. continuing all the seas through to the ink drying on the contract and through the duration of the contract, un-

til it expires. Negotiations training for all staffers who

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custion of High Tech A two cops doing their thing

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The Allipator Strategy Dave, an extermed col league, just returned from variation and constitod that he seent his time off fishing.

platforms with Encisen infrastruc-

relaxing and watching blrds and alligators Dave said: "Every day I'd see the same 10-foot allieator lying on the bank or in the water at the edge of the total " B

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potiations require that you never lose patience. pick your spot, wait and ob cessful resolution of issues and always make your point | perfectly clear to avoid mis communication. Of course, it's not recommended that you 'kill' your opponent, but clear and effective commu nication at the right moment is a very powerful

Survey: Security No. 1 F-Rusiness Priority In a recent survey conducted by Cut-ter Consertium in Arlington, Mass.,

ning strategy:

icy sanked near the bottom on a list of important issues facing orgations engaged in electronic busias their first choice, followed by cost, reliability, user core speed, lock of standards, privacy nies surveyed, only 53% have a fo mal privacy policy. Among those that do, however, privacy is taken seriously: 73% of then said they use er data for internal use only and 17% said they don't keep data

USG Turns to ASP for Expense Tracking Building materials giant USG Corp

ago has chosen Concur cording to USS, it will use the edmond, Wash-based applicat service provider's software to replace its paper-based travel- and se-tracking process, USG said it expects to out both operational

Sorint Leveraging

Corp.'s wireless unit has de

odge, a joint venture of Qua n Inc. in San Diego and Micro soft Corp., amounced in July the third version of its server, which al es real-time access to Microsoft roe 5.5 corporate e-mail. To mpany's firewall Friesson Microsoft

and other workers to exchange e-mail and calendar and centact reation wirelessly. Wireless

Team for Production

are last week to build and ma ket mobile e-mail products made ble through wireless carriers rumers and corporate o

ture and wireless internet phones and other devices. The two compa-SNAPSHOT

Aside from their CIOs' advice, corporate CEOs rely mostly on mal reading materials to gain insight about inform tion Partners Co., a Reston, Va.-based com

asked where they turn for advice, CEOs cited the k · Professional reading materials •Industry peers

·Other business unit heads •Gut instinct

·Interaction with social peers

-Other



22.9%

10.4%



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TECHNOLOGY

NEW CHIP From Siln

Sun Microsystems isat week launched its latest microprocessor, the UltraSPARC IIe, a 64-bit chip designed as a lowcost model for high-end storage systems and applications used by telecommunications companies and Internet service providers. § 80

companies and internet service providers. > 80 IBM HITS WARKET WITH HAMMER WITH HAMMER

IBM has launched Blue Hammer, a new system for clustering Webbased servers that uses the company's Parallel System Support Programs to bring together as many as 16 of the company's RS/6000 S80 Unix servers. The company's aim is to get a jump in the enterprise server space, 9 80

SECURITY JOURNAL

Security manager "Jude Thaddeus" gains new respect for the desktop support staff after trying to work with a major client who insists on using PGP encryption. The broubaha takes him away from a key project — developing a prototype for a smart-card-based system to enable single sign-ons for users. > 82

EXEC TECH

The Digital Wallet is 6GB of plug-and-play external storage that also reads compact flash cards from digital cameras. Just don't sit down if you're carrying it in your back pocket. 3 64

IMPOSING ORDER On Desktops

Desktop management suites are the Swiss Army knives of ma ment tools. They monitor systems, automate software distribution, track licenses, manage hardware inventories and facilitate remote technical support. New standards have made the tools more interoperable than ever But some users say they still don't integrate as well as they could with other ente prise management soft ware and support for mo-

QUICKSTUDY An Easter Egg may be

as simple as a message hidden in the object code of a program that's meant to be discovered by people disassembling or browsing the code. More often, it's a graphic or sound effect produced by a program that's intended either as a joke or to display program credits. 7%

EMEKGING Companies

Start-up NetMorf's Site-Morfer media server software lets information technology managers extend e-commerce Web sites to mobile users and customize applications for mobile devices. Its application server uses XML to interact with back-end databases and mobile devices - an attractive feature for Web site managers. But with IBM in the market, will large companies sign on with NetMorf? 9 78



KEEPING DATA CLOSE TO HOME

Large companies are exploring the variety of storage options available but are wary of trusting mission-critical data to outsourcers. Many IT professionals at those companies say they can do a better job managing storage for bread-and-butter applications than a third party can. And they say they don't want to give up the control and security of on-site storage.

Sun Unveils Low-End UltraSPARC Chip

Processor targeted at telecoms, storage applications, Internet service providers

Inc. last week made available its latest miemprocessor the UltraSPARC He. The thip is the low-cost version

n's 64-bit processor line. The He is targeted to work in the high-bandwidth, quickthroughput realms of telecomons, storage-area networks and Internet service providers, company officials said. Deanswered are questions of whether Sun can use the cheaper, embedded chip to

The Ile will be available in 400- and 500-MHz versions at a cost of \$145 to \$225 for manuturers, said leff Guerrero,

Sun's product-line manager for chip with a 256KB Level 2 cache, a 32-bit, 66-MHz Peripheral Component Interconnect bus and a synchronous dynamic RAM controller and

Calif-based Wind River Systems Inc.'s VxWorks and Sun's Solaris will be the first plat-

ms to support the He. The long-awaited 600-MHz UltraSPARC III is set for release before year's end. Many analysts expected the chip as early as 1998, but Neil Mac-Donald, vice president and research director at Gartner Group Inc. in Stamford, Conn., forecast a release for worksta-

tions by the end of this month.

the UltraSPARC III has passed internal tests on Sun syst MacDonald said it will take about 18 months for the new progration of chies to prove their worth on high-volume. mission-oritical custame

to want another processor.

"Buyers need to be careful with the II series," MacDonald said. "We view this as a 24month tactical investment. After that, you're probably going Alex Zoghlin, chief technical officer at Orbitz - a travel Web site set for launch next year and funded by the nation's

"We're using a gigantic Sun infrastructure, probably one of the biggest on the Internet by the time we're done," he said. "But for our high CPU func-tions. I have 150 Intel machines for number crunching

Zoghlin said he carruse Linux and Intel Corp. machines to get much better performance for the same price. Ideally, he said, it would be nice to use the same platform to run the complex back-office functions he's nut on Solaris machines and the bigh-volume transaction

load of his recognitions unit "We're taking a wait-and-see approach with this release," he said. "It's definitely the right direction, but they're definite ly going to have to become more aggressive on the price in order to win people over."

Guerrero said Sun plans continual upgrades for its re-

seller-available chips. A 600-

MHz version of the Ultra-

Economy Features Last week, Sun Mis

unveiled what will be the economy model in its microprocessor line. The 64-bit chip is called the UltruSPARC He and has the following features: - 400- and 500-40tz versions, with plans to double the speeds by the end of nest year

- A 256KB Level 2 cache

An integrated 32-bit, 66-46ts PCI bus - An SERBAN rectroller and memory

SPARC III will be released next year, and 800- and 900-MHz versions of the He will hit the market before the end of 2001 Guerrero said that by 2003, Sun intends to have all its processors working at 2 GHz.

largest airlines - said price is IBM's 'Blue Hammer' Takes on Sun, HP

In an effort to outdistance Sun Microsystems Inc. and Hew-lett-Packard Co., its competitors in the Web server market. IBM has unveiled Blue Hammer, a system for clustering Web-based servers. Blue Hammer uses IBM's Pagallel System Support Programs (PSSP) to

Sun hasn't set a release date, a key issue for his company.

servers, according to IBM. The system uses PSSP to enable e-commerce firms to simultaneously manage all the \$80 servers in the cluster from a single point of control, the company said. Blue Hammer is already be-

oport Programs (PSSP) to ing used by the Virginia Com-ster as many as 16 of the munity College System to cellor Larry Hengehold. "It's a tremendous horse. We have

based system covers 23 colleges and 39 campuses - 250,000 credit students and 100,000 noncredit students. "We bought two of them ... and we're betting the farm on [the system]," said Vice Chan-

ne through stress testing and other testing to make sure it meets our needs, and we can't soon make it breathe hard It's a big engine." database. The Richmond, Va-

Brad Day, an analyst at Giga ation Group Inc. in Cam bridge, Mass., said IBM execu tives have taken steps to "advantage themselves" in a Web server market dominated by Sun and HP. TWith Blue Hammerl. IBM has added a much more powerful cluster management facility with one control station, so the time it takes sys tems administrators to manage their computer environ

port in the software has been drastically reduced, which is also a cost reduction," he said. Bob Venable, manager of caerprise systems at Blue Cross/ ue Shield of Tennessee in Chattanooga, said his company

has saved money since it began using Blue Hammer. "We use this software to process health care applications and insurance claims," Venable said. "In 1999, we processed 38.2 million health care claims. This software eases administration for all the computers, and we

have been able to lower our cor porate costs because of it." The price of the base confie uration of two six-way clustered SR0s with a control workstation begins at \$705,000. IBM also plans to expand the S80 cluster system to include its 80class Unix midrange servers.

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PCWORLD

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Pretty Bad Day With Pretty Good Privacy

A simple client request for PGP encryption turns into a messy affair; multiple keys leave client annoyed

Security

Raa .. USERS, pah. So far I in my career. I've always managed to avoid doing deshtop-support work. I cocktail party. I've never actually seen know it's absolutely need the software before, but that's still essary, I know it's hard to do well but most of all. I

know I don't have the patience for it. Unfortunately, this week I had no option. We had an urgent request for some desiston support for a client who is trying to use PGP.

PGP stands for Pretty Good Privacy. It's one of the world's most popular cryptographic programs decrypt e-mail, files and so on. It's a good program with a lot of popular sup-port and a very interesting

The latest version has een integrated into Windows quite well - right-click on a file to bring up the PGP menu, easy buttons for Micro soft Outlook and simple, clear over interfaces. But like most cryptographic ftware, there's a lot of complexity hiding under that pretty face.

The client who needs support is a very senior executive and a very important client. He has nersonally hit on the ides of using PGP to encrypt his comif we can't read his e-mail, we can't do business with him, and it's no skin

The PGP expert at the client's comty is a guy from the firm's IT help desk who installed the software two weeks ago and has - and I quote cked around with it a bit."

There are two experts on PGP in our company: one in the head office, who figured our version of PGP and ed it out around the company, and get bored and stop reading. pose, but they're all completely inapme. My expertise with PGP is based on

the fact that I know cryptography theory extremely well, and I once met the author of PGP. Phil Zimmerman, # a

pert, especially since our guy in the head office is on boliday the muck and we're losing business now. Once I start exploring PGP, it turns out to be relatively simple. The interface is good, the buttons (usually) intuitive, the commands have obvious names and there we witands to maide you through anything remotely complicated. In a very short time.

I have set it up on three

test machines and generat-

ed keys for each machine. and am ewapping encryptof omail with case ataly bossesser the printers brad-office expert who set it up did what I call an "academic" job of designing the system. An academic job is one that meets best practices; conforms to

all the basic rules set out in the last article by the latest and greatest expert in the field; is based on sound, logical arster and is almost completely up. usable in practice. In this case, instead of just generating a pair of encryption keys per user, then

publishing one of the pair for people to use to encrypt things for your eyes only. our default installation generates seven nairs of keys. Yes, seven. One is the unique pair of keys for that particular more than we have the incoming Additional Decryption Key (ADK), the outgoing ADK, a revocation key, a corporate signing key and two other key pairs whose names mean nothing to anyone I know what an ADK is only because I used to teach cryptography, and I'm not going to explain it here because you'll

All these keys have a theoretical pur-

the client is distinctly unimpressed at the clutter and promptly deletes them all and demands we go away and do it again better. But just to ensure that no meddlesome end user can circumvent these six additional pairs of keys, only one person has the ability to override the relevant configuration options. Yes that one person is the head-office ex-

pert, who's on holiday In the end, PGP is just as prone to stupid users as any other program, and most of the problems turn out to be user error. We put in a bit of a bodge job to get around the clutter of keys by downloading the freeware version from the Web and installing it ourselves to use until we can get our properly to censed version working correctly

I spend a day and a half firef the problems - a day and a half in which I'm constantly biting my tongue to stop myself from suggesting that it would be quicker and cheaper all around just to hire a courier to deliver these ob-so-sensitive e-mails. I now have renewed respect for desktop-support staff and renewed determination never to let it become a regular part of

The rest of the week is spent delving a little deeper into my idea of smart. proximity card-based access. I have grandiose ideas about doing away with passwords altogether by using smart cards to control access to the worksta tions. I have three months to come up with a working prototype, and every thing so far is looking positive. A key component of this prototype is that the smart card also works as a pro card, so that we can also use it to con

When I looked at this idea four years ago, all the proximity-card manufacturers said, "What's a smart card?" and the smart-card manufacturers said, "What's a proximity card?' so I quickly stopped looking. This time, I seem to be getting a different story. While a few co nies still just scratch their heads, I find two companies that claim it's a sim exercise and that they've done it befo One company is Westings rity Electronics (WSE), which manu-

factured our physical access con

THISWEEK'SGLOSSARY

lies for distribution to other users. PGF

is one of the most widely used crypto-graphic programs available. Features include message encryption, digital sigestality. It is now owned by Net

a inusted third party to access data en-crypted using public key technology. recipient's public key as usual but then encrypts a copy of the data with a sepa If someone other than the original recip ient demands access, he can ask the trusted third party to decrypt it. Uses range from allowing management to de crypt lies when the recipient loses the key to enabling government agencies to access encrypted Mas.

on of DOD ands ed use and a co

system. One of its standard pr cards appears to come with a built-in smart card. If I can confirm that WSE its smart cards, it may all be a very simple exercise. The other firm is RSA Securiry Inc., one of the best-known com panies in the crypto world. An RSA repative dism isses the problem as trivial and says they've worked with

estinghouse plenty of times before. If things continue to go this well, the together. My next task will be to try to make sure I'm choosing the right type of smart card, as I don't want to buy a solution that can't be used for anything else. As I know relatively little about the smart-card industry, I'm approaching this one like a true consultant - I ow a man who is an expert on the subject, so I shall bribe him with an exceptionally nice lunch and pick his brains. That's the sort of work | like!



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A Pocketful of Data

The Digital Wallet is 6GB of plug-andplay external storage that also reads compact flash cards from digital carneras and MP3 players. By David Essex

ORTABLE STORAGE as undergone amaz ine advances in the past half-dozen years, kept pace with the capacity growth of today's multigigabyte hard drives. With the capacity of compact flash cards and Memory Sticks from Tokyo-based Sony Corp. topnine off at a few hundred bytes, digital cameras and MP3 players can quickly fill up. And sometimes a user may want to be able to back up the contents of a laptop while on the road. It would be nice to have something nearby with the capacity of a hard drive and let is a 6G8 portable hard drive that connects to the Universal Serial Bus (LISB) ports of PCs and Macintosbes.

Portable hard drives have come and gone. What makes the Digital Wallet unique is its ability to perform high-capacity disk operations without being connected to a PC. Other portable storage devices, notably Roy Utab-based Iomera Corn's 40MR Clik and 2GB lay deines office cimiles forestines What they don't have is 6GB, enough for 6,000 high-resolu tion photos or 150 hours of music. Minds@Work says resellers will soon offer even

higher-canacity drives. With that much room, you can free up space on your dieital camera, for example, by inserting its flash media into the included PC Card adapter. then lifting the door on the right side of the Digital Wallet and sliding in the adapter Four buttons are all was need to control downloading

and uploading from the menu that appears in the mono chrome LED. The Digital Wallet makes hard-drive sound Minds@Work's logo flashes on-screen and presto: your files are off the flash card and on the drive. The unit ships

with an adapter for Compact Flash, the most popular storage type, but you can also order adapters for five other types, including Smart Media and Memory Stick. for less than \$100

Besides aucmenti the limited storage of ortable digital devices. the Digital Wallet makes a supplemental hard drive for desktop systems, appearing as a removable drive in Windows Explorer Its usefulness goes way beyond that, thanks to its ability to be quickly plugged into the USB ets of PCs and notebooks that have its software installed. Large database or image files can be more easily shared and displayed on other present. With the hundled SmartRack

the Digital Wallet as a backup device and for synchronizing files among PCs. Also included are image management and

archiving software The Digital Wallet contains a 54-MHz ColdPire pro from Motorola Inc. - esser tially a computer on a chip that provides limited. PC-like control. Also inside is a 2.5-in. portable hard drive from

Toshiba Corp. - the same model used in some Toshiba notebooks, according to Minds@Work There's a mono chrome LFD that's strictly for status and control

informations don't expect to or files on it. A small plastic attachment holds one end of the USB cable as well as the AC adapter, which doubles as a charger for

the removable batteries. The 4,200-rpm drive's 8M to 12M bit/sec, data transfer rate and 13-msec seek time are considerably below those of desktop drives, and USB limitations throttle performance. But 1

found no appreciahie slowdown during informal tests I conducted. IPEG files on the Digital Wallet loaded about as fast as from the internal hard drive. Uploading several images from a compact

flash card took about 10 seconds, an appreciable though tolerable wait. Some Concerns

Minds@Work still seemed to be working out kinks when I tried Digital Wallet a month after it began shipping. For one thing, while Digital Wallet can bold a lot of photos,

you can see them only if you And I couldn't get it to run without a call to technical support, which e-mailed a patch that resolved a conflict with from Hewlett-Packard Co. and

Adaptec Inc. drive control in my Celeron-based Pavilion

book from Gateway Inc. (This was a day after I was left on hold for 90 minutes during a weekend call to a technicalsupport line and finally gave up.) However, the drive soon stopped working on the HP. and I began getting Windows

messages indicating a problem

with my USB controllers.

Durability may be a con-

too. Although the 12-oz. unit feels fairly soldoors for its battery and the adapter seem flimsy. According to Minds@Work the unit has withstood drops of three and four feet in inter nal tests; I opted not to

The name of the product is a little confusing. Microsoft Corp. used to have a product called Wallet, now renamed Passport, designed to address secure internet payment sues. Another product, the eWallet, is available from Ilium Software Inc. in Ann Arbor.

try that test.

Mich., for \$29.95. It's a handy utility for Pocket PC handhelds that stores photos and personal information, including password-protected replicas of your credit cards (with personal iden-

tification numbers) and other items that may normally reside in your back pocket or purse. The Digital Wallet shows promise as a unique storage ion, but it may need tweak ing before it can serve at a true

plug-and-play device. My advice is to try the product before you buy it. Essex is a freelance writer in Antrim, N.H. Contact him at

david essex@conknet.com.









Sort and staple just doesn't cut it in a right-from-your-desktop, 3-hole-punch, saddle-stitch kind of world.

Cattott KNOW HOW

Electronic clothing may be a gimmick now, but it promises a future of technology invisibly integrated into our daily lives. By Peter Panepento

an MP3 player.

equipment. And it's just the be-

ginning of what could become

the next technological frontier.

on prototypes of garments that

tioning System so wearers

Philips is already working

sect to the Global Posi-

turbed to a wet suit while up-

can be found, for example, if HE LATEST IN Eighion gadgetry will they have an accident while hit boutiques in skiing. It has also created an experimental sports bra that Europe later this month. For about can measure the heartbest of \$900, plugged-in consumers the wearer. Company rewill be able to purchase a searchers are working on clothsacket equipped with a remoteing made of conductive fibers controlled mobile phone and that will allow wearers to warm

or cool themselves on the fly. "It's clear that people carry The jacket, the product of an 18-month marriage of engi-neers from Koninklijke Philall of this equipment with them," says Ellen de Vries, a ips Electronics NV in Amsterpublic relations manager at Philips. 'If you make 'intellidam and designers from Levi Strauss & Co. in San Francisco. clothing, automatically is the first practical example of you have all of that equipment wearable electronics - clothwith you. ing that comes with electronic

While the Philips/Levi jacket, called the ICD+ (Industrial Clothing Design+), is the first wearable device to be marketed to consumers, the companies aren't the first to try their

lanta-based Georgia Institute of Technology, for instance, have been experimenting for years with wearable computer systems that, although cumbersome, have proved that you can literally stay connected while on the go.

The Australian Institute of Marine Science in Cape Ferguson, Australia, meanwhile, has created a system with a private company called WetPC Pty. in Garran, Australia, that allows mers to control a computer at parts of Europe - the phone

derwater and transfer data to

researchers oo land. And IBM researchers have developed the IBM Wearable PC While the 233-MHz system isn't ready for sale, officials boast that it has the power of a ThinkPad 560X shrunk to the size of a Palm Pilot

"Initially, we think the Wearable PC will find applications in business," said IBM researcher Russell Budd in a written release. "I think you'll see people using these at aircraft flight gates, repairing your copier or tuning your car's engine. Eventually well, who originally thought

people would wear radios, tape and compact disc players?" A New Fashion Genre

But because Philips and Levi Strauss are the first to hit the hands at wearable electronics. market with a practical piece Students at MIT and the Atof electronic clothing, they're well on their way to becomine

leaders in a new fashion genre. Levi's Pieter-bas Stehmann, associate brand manager for the ICD+ line. likens it to how Levi Strauss became associated with denim leans in the 19th century. "It's a new direction that we all know is going to come," he says, "We are now pioneering electronics for the new worker."

Although the ICD+ jacket will be available only in certain in Erie, Pa.

runs on a cellular syst that isn't compatible with American phones - oews of its pending release has created a buzz oo both sides of the Atlantic. The Wall Street Journal recently ran a lengthy feature on the jacket, and Levi Strauss and Philips officials say they've had an avalanche of media inquiries. "It's unbelievable," says Steb mann. "The impact worldwide has been remarkable. It's been

going like fire." Part of its initial success comes from the fact that the ICD+ actually looks like a jack et but acts like its own portable stereo system. It includes Philips ear gear and a microphooe inservated into the jacket's collar. The earphones have an enlarged air chamber for enhanced sound. When not in use, they can sit in rubber housing below the collar on

the front of the jacket. The jacket also features a Philips Rush dieital audio player and a Xenium phone with voice command and voice dialing capabilities. The phone is connected to the MP3 player, and both are controlled by a remote device that lets users switch between the two

Stehmann says the jacket is washable after some of its pieces are removed and that plans are under way to create a wireless version of the ICD+. According to de Vries, who

is already modeline the tacket in the Netherlands, it performs the added functions without tipping off passersby that it's anything more than a simple lacket. "I have to show people Look at what I'm wearing," she says. "The whole idea is you don't see the technology around you."

Punepento is a freelance writer



THE FUNDAMENTAL ELEMENT FOR THE VORLD'S FASTEST NETVON

Desktop-management suites are more integrated, but interoperability and support for mobile users are still lacking. By David Essex

RD LANGE, a technical adviser at Nabisco Group Holdings Corp., an \$8 hillion international food company in Parsippany, N.J., the softwareation feature in the company's desktop-management dications suite has been an undenible money-saver. Microsoft Corp.'s systems Management Server (SMS) 2.0 has greatly simplified frequent up-grades of antivirus definitions, he says.

client software as well as to distribute updates to its Essbase multidimeo-sional database from Hyperioo Solutions Corp. in Sunnyvale, Calif. "It's saving Nabisco a huge amount of mooey in distribution costs," Lange says. For many companies like Nabisco, desktop-management suites are also valued for their ability to track licenses, manage hardware inventories, facilitate remote technical support and

monitor improper activities. Operating grases or autovirus certamons, ne siyst.

Last year his groupes eroit or 40,000.00

copies of virus definitions, a task that

Nakhoulov system in airt or up to handle.

The company's application department

employerSAS to upper 65 M-67 N-75. Dieter Associates International Inc. in

Line in St. (Employer)

suites such as market leaders SMS, lotel Corn't LANDesk Management Suite (LDMS) and Novell Inc.'s ZENworks provide centrally managed control over key aspects of users' desktops. Desktop-management software and suites have historically been plagued

by incompatible standards for collecting and storing hardware and software configuration data. This has made it hard to share data among competing products and related tools, especially asset-management software from the likes of Remedy Corp. in Mountain View, Calif., and Percerine Systems

the Commoo Information Model (CIM), a metastandard that accordates older - yet still popular - standards such as the Desktop Management Interface, which provides a uniform way for hardware vendors to report system configurations to manage ment software. While vendors report satisfaction with CIM as a widely followed standard, they acknowledge that true interoperability haso't arrived, though users are clearly demanding it.

Two trends should continue to influ ence the design of desktop-management suites, according to vendors and analysts. The biggest is the need to



TECHNOLOGY

manage remote and mobile bardware that today's unitse barry touch. In addition, technologies such as Light-weight Directory Access Protocol. Novel Directory Services (NISS) and Microsoft's Active Directory enable information technology administrature to include users alongide Picz, prieter and other devices in a broader. Further trends toward this clients and serve-based applications are driving this influt or directory standards into declaron-management unitse.

Three IT managers agreed to share their experiences with desktop-management saites. All say they're generally satisfied with their tools. But they also say interoperability and standardtrastion could still stand improvement.

Managing a Cast of Thousands

Lange uses SMS to manage about 9,000 Windows NT-based PCs in 184 locations in the U.S. The suite's main functions are software distribution, hardware inventory and remote con-

trol, while App Manager from Smta Chars, Calif-based Net1Q Corp, monitions mission-critical NT applications and NetView from Austin, Texas-based Trivel Systems line. Everp as say on the mainframes. Other departments use Remchy's Asset Management, but for them to get SMS data, Langer must create SQL reports in SMS and e-mail them. He says the data-sharing process should be more automated.

The system's inventory function helps the congany locate leased systems and control software that could present problems. "We've been also to track down nodes that had illegal software that we dish'd want on our systems and send out SMS jobs to remove them." Lange syst. He sidd he plans to soon put hardware inventory reports to the Web for all employees to access. Lange says he experienced a few bugs with SMS. For example, software bugs with SMS. For example, software

soon put hardware inventory reports on the Web for all employees to access. Lange says he experienced a few bugs with SMS. For example, software packages: created on Windows 2000 servers were ignored when downloaded on Windows NT 4 systems. SMS had to be uninstalled and then re45

[SMS] is saving Nabisco

a huge amount of money in distribution costs.

WARD LANGE, TECHNICAL ADVISER
BARRICO MEDIUP BOLDINGS CORP.

installed on Windows 2000 servers that functioned as domain controllers. And some site deletions in the SMS inventory screens didn't always progate through the directory hierarchy. Microsoft addressed the problems in June service pack upgrade.

Lange says he has specific ideas for the next SMS upgrade. Two would love the next SMS upgrade. Two would love

multicast," he says, Multicast would scan exceed 100MB per system, Also on his wish list are "Dela" upgraditus, which which swess time and beauth offs by carrant that have changed better integration with Windows 2000 (the full roll-out is in the planning stopes); and a smaller client footorpin.

out is an the planning industries, mass smaller client footprint. Microsoft group product manager David Hamilton asys these items are under consideration, but customer demand for multicasting has been minimal, in part because multicasting requires additional server and network investments. We think it's a young technology. Hamilton surv.

schmidge, Hamilton upp, Young Lange step his Condidering using additional inventory software in SAS to perform predictive failure analysis based on data from newer hard drives that report on their own health. He's also evaluating SAS's license management feature. Nathios's averey group investigating using this clients, but it's unclear how they libe managed if they don't run Microsoft's Terminal Server suplance that doesn't have a lovel and proposed to the server spelling of the control of the proplane that doesn't have a lovel hard drive, SAS would have little role in that," Lange uses.

Permission Required

Alex Kin, manager of IT services and operations a Lufthman Systems Network at Chicago's O'Hare International Airport, and Clark Eggers, editoral Airport, and Clark Eggers, DIMS Versions of Jand 64 to manage 700 Windows NT workstations and Japops in the Western Hemisphere offices of the German airline's cargo division. Administrators elsewhere use LDMS to manage an additional 3,000 systems in 200 global location.

systems in 230 global locations. Kiss says Latthansa engineers in Germany picked LANDerk largely because of a critical item: federal privacy laws requiring employees' permission each time their systems are remotely accessed. However, "In our (North American officed, we've turned off the permission feature," he says.

LANDest provides other benefits, sepecially for remote troubleshooting and software distributions. When neccurary, workstations can be rebuilt by using LANDest to tell a local manage ment workstation to start a sequence that reboots the system and uses a bonemande server script to reinstall the system's software, LANDest's removing the start of the start of the production of the start of the production of the start of the production. Which are often mischarge products, which are often mischarge teritied by users, according to Kins.

- LUFTHANSA SYSTEMS NETWORK'S Alex Kies (left) and Clark Eggers say they're interested in LAMDesk's new multiresident selection.



TECHNOLOGY

Systems that don't meet minimal hardware requirements are easily spotented in the LANDesk inventory. "We found a number of PCs that were shoot of memory." Eggers says, "We were able to quickly upgrade them." Adds. Kiss. "Last year, we were able to tell which sites did not complete their YZk upgrades. We were able to use LDMS to get them their updates."

to get them their updates.

Eggers says that LANDesk's software distribution and hardware inventory features are easy to use. But despite the availability of industry standards for reporting system configurations, he says LANDesk's ability to detect certain chips and peripherals is lacking.

"In my opinion, it could be bettee."
Kiss and Taggers say that in the near term, they fee levenly interested in LAN-Deak's new multicasting software, which speeds software distribution and economizes on network handwidth by transferring packages to subnets, rather than directly to clients. "That's one bell of a took." Exercisary.

"That's one hell of a took," Eggers says. "It opens up a lost of options." The implications of an upcoming thin-client development project are fuzzy and will depend on the robustness of LANDesk's thin-client software, yet to be evaluated by Lufthanea. "How it will fit into LANDesk, we don't know yet, 'Kiss says."

occial Delivery

Novell's ZENworks Version I.1 is an indispensable tool for software distribution and remote technical support at Hamilton Sundstrand Corp., a division of Hartford, Comm. based United Technologies Corp., that manufactures auxiliary power units and fans for airplanes. Tom de Castra, master information systems consultant at Hamilton Sunstrand, and Laura Hecburn, a learn

Product LANDesk Management Suite 6.4 Common: Intel Corp.

Company: Intel Corp.
Prining: Starts at \$750 for five nodes; server software starts

at \$150 Walk www.intel.com Predict Microsoft Systems Man-

agement Server 2.0
Company: Microsoft Corp.
Printeg: Starts at \$239 for five users;
server software comes with Wisdown NT Server 3.51 and later
With www.microsoft.com

Product: ZENworks for Desknops 3 Demparie: Novell Corp. Printing: Starts at \$295 for five users; server included with Networe 4.11

leader from El Segundo, Calif-based Computer Sciences Corp, who works at the San Diego site, say ZENworks enables them to almost completely automate application installations on about 850 Windows NT 4.0 workstations. "We have literally hundreds of applications, and every one is delivered, in one way or another, with ZEN-

The team used ZENworks to roll out Microsoft's Internet Explorer 50 after business hours, and plans to use it for a migration from Novell's GroupWise e-mail to Microsoft's Exchange and Outlook. Finer cootrol over applications will Come with ZENworks 2—

works," de Castro says.

the upgrade is under way. De Castro says it will let users run application objects and can associate such objects with individual weekstations. He says be also eyeing recently released ZENworks for Desktops 3, especially its off line distribution feature, a critical piece in supporting mobile systems. De Castro, such that because of its

NDS integration, ZENworks was the only suite given serious considerat The company runs mostly NetWare servers. NDS brings its familiar scheme of user rights and director based "policy packages" to desktop management, he says. "It's a good de sign, and the fact that they leveraged it so well was really the deciding factor," savs de Castro, who nonetheless criticizes Novell's decision to include hardware inventory data in the first version of the directory. "That doesn't belone in NDS," he says. "It's a lot of volume. It's too much, and you need a better reporting interface." He says he would

which applications have installed patticular Dynamic Link Elbarates. De Castro says the slow performance of ZENsopolar emodes control feature is one of the subris few disappointments; instead, he and Hepburn use Cupertino, Calif-based Synamics Corp.'s P.CAsyshere to manage mobi systems. He says he also needs ZENsworks to do a better job reporting tatass of application installations, which tometimes hang up when ZEN

also like to use the suite to determine

works fails to complete its processes. Overall, satisfaction with ZENworks is high, though not easily measured in dollars and cents. "I think we've saved time," Hepburn says. I

Essex is o freelance writer in Antrim, N.H.



We have literally hundreds of applications, and every one is delivered, in one way or another.

WITH ZENWORKS.
TOM DE CASTRO.
HYDRIATION SYSTEMS CONSULTAN
HAMILION SUNDATRANO CONP.

MANAGEMENT GOES MOBIL

The need to manage making and remote optimize will have could of the growth of dealings management software over the most low speer, products research international Dail Daily. (DO) on Francisylam, Miss. (DC estimated the U.S. notices workforce of 30 million laws year and products needly Phis seriest growth. And 27% of instancts executives nor report used monets were represented at least one-18th of the notificion. So when are the took to manage from work?

for one, but mostly added features for mobile opinions to I 2Discolar 3 salis), starts today raly on products from a or group of companies that apaciation in the unique problem tracking and enemating opinions exhalls the office.

Catalo Carp, and Xindhallet Inc. offer anthress finc. (in increasing Carp, and Xindhallet Inc. offer anthress find community processors that are frequently broken and conducted our low-benefath connections, Michiga Automation, On

aprismo cuch as Microsoft Corp.'s Windows CE and Santa Clara, Cell.-based Palm Inc.'s Palm US. Two important inclinitial features in this niche include chardeoint restant, which allows a portable notions to mean

a download whom it left off after an interruption, and it width firefilling, which adjusts downloads so they downloads mobile computer's nativote recourses.

On case was two are not received to the test large installation of these comparent rather, and individuality place of these comparent rather, and in distributions possible to been one view for management." any Staphen Dasie, a series research analysis of ECF. For example, Californ installation and the received of the California of IPP 3 (See Arellia California). The California of IPP 3 (See Arellia California) can of IPP 3 (See Arellia California).

These venture advancings that their connections to handwide, especially, aren't as sold as to dealtop PCs. More require handwide to be declard in that PC synchronization. cradies for software updates and reports on system states.
And some anishook PC vendors - notably Saleway Inc. in
San Diago - don't uniformly support Dealings Management
Interface, says Backly Highlands, vice president of product do

"One of our most important directions for the future is within singles support" for even the nevent wireless devices, the pagers and Web placess from Waleston, Ontario-based beauth in Motion Ltd., says little Septinally, an enterprise recomberd at Mobile Automation.

contract in commany interprets are resident to buildy course canneal tips into the office for marker and high-plant calls are restaured, but claims. Date claims statistics. That corredvents the high-date apportunity. In 1999, in interviews with over 20 in companies with markets remote can from LDC source of executing a typical help date call tales 20% to 30.0% larger for markets are filled from 1999 and 1999.

mende weers then for LAM users, "he mays, has user of Intel[®] LAM Coak Management Suite continuhandwidth is included a burrier to effective administration selecteds. "That's the resears we don't alternat to provnte woment for our include." uses Alers Wes at Laffabor who woment for our include."

terre Naturals. - David Essex

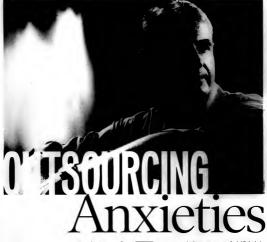
How do you choose a UPS

when you can't even guess how many critical systems you'll have to support next year?

By picking a UPS scalable to your network requirements, space, and hudgetary needs







As their needs increase, companies are exploring the variety of storage options available but are wary of trusting mission-critical data to outsourcers. By Elizabeth Ferrarini

NY MERCLLE, a senior data center manager at Symbol Technologies Inc., a \$1 billion bar-code system manufacturer, says he doesn't worry that the HP 3000 legacy system in his company's Bethpage, N.Y., data center will have a major meltdown. Hewlett-Packard Co.'s Recovery Support Services' trauma team has reheasted the disaster recovery drill—hring the backup tapes from Arcus Data Security Inc.'s vault in Boston to the hot site in Valley Forge, Pa., and begin restoring about HOGB of data on an identical HP system. HP's dry runs have restored the production system in less than seven hours.

But Merolle says Symbol expects to enhance some of its current storons through outsourcing arrangements. And though he says he doesn't worry about disasters, Merolle acknowledges worrying about the accessibility of the worry about dissolers, Metroide acknowledges worrying about the accissionity of didata. One opion cells for backing up the data center servers collae to similar servers at a remote hot site — either owned by Symbol or maintained by a third party. Pay-a-ty-up or storage also appears it to Symbol as a way to complement an 8-ter-abyte (TS) EMC Corp. Symmetrix system. "Wire talking to wendors such as HP, Dell and EMC about storage systems configured for the disk space we need at a

particular time. We'd just pay for what

we use," anys Merolle. However, outstourcing for an SAP AG application didn't show much promise. Merolle says some of the information technology executives looked at Queus Communications International Inc. in Denver. "We require a response time of more than 15 seconds per SAP transaction. I want to get it below a second." the says Queut offered a 6-second per-house to the says Queut offered a 6-second per-house time of the says Queut offered a 6-second per-house time of the says Queut offered a 6-second per-house time of the says Queut offered a 6-second per-house time of the says Queut offered a 6-second per-house time of the says Queut offered a 6-second per-house time of the says Queut of the says Queut of the says Queut offered a 6-second per-house time of the says Queut of the says Que

transaction guarantee. IT professionals at Fortune 2,000 organizations are taking a hard look at storage outsourcing services, ranging from on-demand, on-site virtual utilities to remotely managed, pay-per-gigabyte services. But many of those IT staffers are kicking these services' tires and then walking away - at least for now. Many of them say they can do a better job iging storage for bread-and-butter applications than a third party can. And they say they don't want to give up the control and security of on-site storage. Meanwhile, some storage outsourcers and systems integrators are quietly making inroads into many ore tions' on-site storage operations

Glenn Jacobsen, a senior partner at the ITilliant Group, a Cincinnati-based firms that assesses storage technologies, says, "We haven't seen any movement or desire from our Fortune 500 clients to outsource any storage operations to an Joutsourcerl. Our clients don't want to give up total control of their data to a

third-party wire miles away."

Outsourcing may provide IT executives with an option when they face the need to mold an unruly band of disparate servers into a well-managed, scalable storage infrastructure.

Like a lot of insurance con Sun Life Financial Services of Canada Inc. has given business units the goahead to buy the most cost-effective storage, says Laurence McKenzie, Sun Life's vice president of worldwide technology and strategy, who works out of the Canadian firm's Wellesley, Mass., office. The result for Sun Life, which manages \$225 billion in assets, consists of a 7TB collection of about 100 Windows NT and NetWare file and print servers. and about 150 development servers. Distributed storage growth runs about 30% per year. In co set mainframe storage on an older EMC Symmetrix remains stable with less than ITB.

Working with the CIO at Sun Life's home office in Toronto, McKenzie has begun to consolidate the distributed servers into a scalable storage infrastructure managed by a central entity. "We need better data prostection for

backups and disaster recovery, as well as to cut the windows for these functions," he says. While McKenzie won't go into detail about Sun Life's plans, he says some of his research has focused on stormacounterersies.

"StorageNetworks, which offers on-

demand storage, did a nice consulting job of belping us to understand our key problems. However, we aren't ready to put any storage off-site," he says.

McKenzie has also looked at Storabillty Inc.'s on-site service. For a serviceper-gizabye charge, the Southbows. Mass-based start-up will configure and lease the on-site storage and manage in remotely using off-the-shelf tools. Storability has no access to corporate data. "These fifts sur they can leverage.

"These folks say they can leverage part of my installed base with a new storage offering. This mix would make my mature storage more reliable," says McKenzie, who adds that although he's intrigued by this offering, he prefers to keep his outsourcing options open.



We have the staff to manage our database applications and storage better than anyone else. Outsource if you can't get the resources to do it

yourself.

Where the data resides in relation to applications can be critical to the IT infrastructure, so keeping the storage systems with their Sybase Inc. and IBM DR2 servers will remain the norm for Blue Cross/Blue Shield of Tennessee in moors. Hugh Hale, director of technical services at the health insurer may belp IBM evaluate its new prodnote and services, but he says he won't consider an outsourcing arrangement with IBM. "We have the staff to manage our database applications and sto better than anyone else. Outsource if you can't get the resources to do it curself" he says.

Storage outsourcing may offer more farepower than even a Fortune 1,000 firm needs, or it just may not mix well with the way it does business.

Wendy's International Inc., a S5 billions of burgers each year, but its corporate data.

center manages a lean SSOGB of storage, and 300CB of that is mainframe storage. "We don't have enough storage growth to warrant outsourcing any of it," says &C Ohanian, director of enterprise technologies at Wendy's in Dub-

lin, Ohio. "I haven't bought any mainframe disks in 18 months."

R. R. Donnelley & Sons Co., a Fortune L000 commercial printing farm in Chicago, maintains a close relationship with its clients, including Harvard Business School Press, publisher of the Haruard Business Review. Each step of the prepress process at an R. R. Donnelley plant consists of having data readily available from on-sites, high-perfor

mance storage repositories.

When we go to put ink on paper time is of the sessence. Taking the storage outside of a plant's control would put us in a bad position. How would we meet a publisher's requirement if something goes wrong? We'd he dead in the water," says Kirk Brauch, the prepress technology consultant at R. P. Donnel les, who creases policies for the firm!

IT purchasing decisions.
The enhexance of large companies to embrace storage voncourcing hant's de-terred storage system integrators, like lanegrande Archive Systems lose. In Palo Ahn, Callf. from expossing beyond delivering and installing equipment. For the past six years, integranded Archive has done work for a mix of Forenan (DOO companies, not a Sybnas, and devenue, like Yahno har. Imagenated Assistance of the Companies of

we'll collocate our servers, "the says. Although it's a very conservative first step, stonage outstourcing for remote decision backups or a Web alte relieves an I's staff of some administrative tasks. For example, mobile and teteroamstring employees at Kemper Insurance Co. can back up their PCs and Jupops over the Web to servers at Connected Corp. in Natick, Mass. scoonfling to Glauder. Connected Sorp. Gaudet. Connected's product market-

ds-on services and remote m

ing services from data servers, where

ing director. What should you do if you have excens capacity in your data centre. "Obsessores," as previr juench, direccentre of the control of the cont

per year. Lynch says.

"We're looking to lease 15,000 square feet of our data center to a start-up," he says. "We're also looking at making storage space available to libraries." 3

ferrarini is a freelance writer

Look Before You Outsource Storage

Some CIOs and chief technology officers may hesitate about outsourcing storage, but they don't mind giving advice about how to as iect a storage outsourcer. Here are some of their tips.

John Brighton, CRO, Autre Inc., Hartford, Conn.: • Precisely deline the systems' requirement

Place your environment with a company not stands with you has both sold extricts of transparent mental and transparent not stands with you has both sold extracts not transparent mental and can change with

Hugh Hale, director of technical services, Size Cross/Size Shield of Ter

reases in Chattanoops:

Don't just meet the service's staff. Get the recurries and review their qualifications.

Service-level agreements should focus of

Jonathan Harper, CTD, FunduXpreen Flasocial Metaudas for administrate table 6 of all schadules for administrate table such as backaps, written into your contract in For storage on demand, forecast your ca pathy result by time periods. Give the schadule to the service so it can plan its

Determine how much it's going to cost.
 your stell to oversee the service.

technologyquickstudy

Easter Eggs

ASTER EGGS aren't unique to computer programs. They also occur in movies, music, art, books and other creations - but it's in computer software that they have achieved their greatest notoriety. An Easter Egg may be as simple as a message hidden in the object code of a program as a joke, meant to be discovered by people disassembling or browsing the code. More often, it's a graphic or sound effect produced by a program that's intended either

as a joke or to display program It would appear that many programmers' desire for professional recognition - or even cultike immortality of a sort - isn't being adequately satisfied by their employers, because most of the Easter Eggs that have been document ed are in some way tied to a hidden list of credits. These usually present the names and ionally pictures of the DEFINITION

An Easter Egg is a generally amusing message or piece of software hidden inside another program, which could be an operating system or an application, often listing or depicting programmers on the development team. One usually accesses an Easter Egg by means of an unlikely or unusual combination of keystrokes.

something you're likely to in-

program's developers, often | tions for getting there aren't | type in "Blue" and select the My personal favorite among the Easter Eggs I've seen is a routine buried in Microsoft Corn's Excel 97 spreadsheet program. Not only did its creatoes put their names into the software, but they also chose to do it by creating a flight simulator inside the Excel program,

A Space Odyssey. The instruc-

in which you could fly around over a virtual landscape until you found a black monolith with credits - like the one in the Stanley Kubrick film 2001:

fly around, with the right button forward and the left button Not to be outdone, the Microsoft Word 97 developers included their own game: pin-

voke by accident. Here's the choose Fort Style Bold, Color trick: Open a new Worksheet Blue. Back in the main screen, and press F5. Type "X97:L97" type a space after "Blue" and into the Reference box and hit then click on Help/About. On Enter. Press Tab, then hold the Word icon, do a Control-Control-Shift and click on the Shift-left click, and the game appears. Use Z for the left flip-Chart Wizard toolbar button. Now you can use the mouse to per, M for the right flipper, and Sometimes Easter Eggs be-

word. Go to Format/Foot and

come a running gag among developers. For example, in Lotus Development Corp.'s Notes Version 4.0, if you click on ball. Open a new document, Help/About Notes and type "elvis is not dead" (all lowercase letters), the bead of Ray Ozzie (Notes' chief architect) appears and starts spitting out credits. With Notes 5.0. if you do the same thing but instead type "yes he is", you get this version's credits courtesy of

Mr. Ozzie's simulacrum.

An old but well-known (relstively speaking) Easter Egg, in Word 2.0, makes a marketing statement of sorts. Click on Tools/Macro, type in the macro name "Spiff" and click on the Edit button. When the macro editing window opens up, select the window com and delete them. Then click on File/Close. When you're asked to save changes, respond with Yes. Click on Help/About, then click on the Word icon in the dialogue box. You'll see a little animation showing a series of figures, helped by the Word icon, defeating a huge green ster identified as "W.P." Easter Eggs are certainly

dits couldn't be re-

sine and generally good fun, but there's a price we pay for them. One is in the am of development time that's siphoned off into such activities. There's no way to tell how much of an impact this has on any given product's schedule. but it's pretty clear that it didn't shorten the development and debugging process.

Another is code bloat, With disk storage becoming ever cheaper and newer systems having more and more RAM as standard, code size may be less important than it once was, but clearly, any application that has an Faster Few inside it has to occupy more disk space, and quite possibly more system RAM than it would for just the application's normal operaons. And that means more time to load, install and con-

tend with P

information about Faster Fees







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E-Commerce Comes To Those Who Travel

NetMorf transforms e-commerce

Web sites to support wireless users

ETMORF INC. wants to help corporate information technology departments stisfy the needs of the growing population of mobile device users who want access to e-commerce applications over

the internet. The Boston-based vendor thinks that so-called screen scrapers that pure down HTML-based Web pages for wireless devices aren't effective or easy to negotiate. Net-Morf's SiteMorfer media server provides companies with a modular, XML-based platform that enables users to rapidly develop and deploy e-commerce applications that support any mobile device, says NetMorf chief scientist Rajecy

A Customized Catalog

PurchasingCenter.com Inc. in Burlington, Mass., which provides products to maintenance service companies, uses SiteMorfer to neganize its product estalog so maintenance workers in the field can place orders from handheld devices such as those from Palm Inc. in Santa Clara, Calif., and Wireless Application Pro-tocol (WAP)-enabled phones. PurchasingCenter customizes its user interface for each maintenance company it conreacts with

"Not everyone has a desktoo (computer), and many are mechanics, so we had to develop a way for them in access our sites and catalogs. [NetMorf): technologyl is a practical way of help," says Bill Sullivan, vice president of industry marketing at PurchasingCenter.com. Sullivan says he used Net-Morf's product to make his catalog interface look like a ndard order form instead of an Internet applicate

NetMorf uses an XML-based namic content specification calls SiteMorfer Markup Language. The SiteMorfer me-

dia server includes an application server and a device server. The application server receives a request from a mobile device, retrieves the information from the back-end database using a plug-in, translates the search results into XML and returns the results to the device server. SiteMorfer de-

XML content ions the appropriste mobile markun language, such as the Wireless Markup Language (WML) or the Handheld Device Markup SiteMorfer's modular architecture means that it can sup-

port additional databases or mobile markun languages by adding new plug-ins. This approach means less hard coding when developing Web applications, says Tipnis

CEDEXPRESS Co. uses Site-

NetMorf Inc.

Location: Boston obone (617) 578-9800

all: www.netmorf.com he: XML-based server softwore for creating and deliveren

ble devices Why it's worth watching: If managers can use NetMort techaccess to e-commerce sites are back-end data for users with

mobile rimeres Company officers: Michael Maggio, CEO and

Rajeev Tignis, founder and vice ent of engineering in Kamedolli, founder and rhei terbookov officer

-20

rate: 40,200% annual projected Burn money: \$11.7 million in Series B lunding

from VantagePoint Venture Part ners for and DSI not for and \$810-000 in Series A lunding from oriuste investors.

Products/pricing: NetWorl charges \$100,000 for its softs \$1,000 to \$5,000 and an initial consulting fee of \$15,000 to \$25,000

Customers: Barnesandnoble.-com, Purchasing Center.com Inc. and CEDEwness

· Software is better suited to moble commerce than to document NetWorf will face increasing comsetting from PM and others as

Morfer to connect CEOs to the resources they need, such as market information, news and legal resources, says Christine Eyre, vice president of marketing at the Boston-based compoery. The firm's clients appreciate having the ability to program all the information they want to see on their handheld devices from their desktops, she says. If a user wants to see

only content from Nasdaq and CNN, for example, he can choose to program only those links for his mobile device Although her customers like SiteMorfer's case of use, Eyro says there is one drawback. We have quite a lot of Euro-

pean customers. In February when we launched, NetMorf could not support the Euro-

pean system," she says. European handheld standards differ om those of the U.S., and CEOExpress's launch "was in the U.S. only," she says "That's not the way you want to launch in a global community. NetMorf has promised an upgrade that will support the

European standard, says Eyrc. Fair Game Magnin says NetMorf mar-

kets to any company that par-ticipates in e-commerce rather than control-based exchanges. Bus larger competitors, like IBM, are also focusing resources on mobile Internet

an analyst at For Research Inc. Boston. users, says Mark Zohaz, an analyst at Forre emerging Companies There are may burdles in the way.

knowledges that NetMori bas an early lead with its use of a modular, XML-based archi-

NetMorf isn't profitable yet, but Maggio says he helieves the company is in the right place at the right time. He estimater that NetMorf's resum for this year will about \$3 million and predicts \$25 million

NetMorf landed its first large customer, Barnesandnoble.com Inc., in early August, when the New Yorkbased online bookseller an-nounced that it would use Site-Morfer to create an e-commerce site for customers who use mobile devices.

Holohan is a freelance writer in Athenr Ohio

the buzz STATE OF THE MARKET

Mobile Space Moving Fast

Formester Research analyst Mark Zoha says the market for exploss internet access will be huge. This difficult to say the size of the market - It could be all enterpree customers, he says [NetMorf] is really trying to add wireless extensions to all corporations

However, he adds. The market they're trying to participate in - using the back-end information and databases is not going to move quickly."

While NetMort aspires to be the stan-

dard application for all mobile internet applications, Zohar says he thinks it will best serve start-ups and medium-size businesses. But CIOs know they will tually, he adds, and NetMorf has an ad vertage as a first-mover in helping corr paries in the transition to support wire less devices.

Zoher says the competitive space for weeless internet access is still develo ing Hore is a sampling of the more no-

Everypath Inc. Senta Clara, Calif. www.everypath.com

This application service provider (ASP, reclicates customers' Web stos for mo hilespars fracts as a hidler between users and the original Web stes, so cus tomers don't have to make code changes to their original sites. Its ren ing tool takes HTML or XML Web site

into WML script

Air2Web Inc. www.air?wrh.com

Also an ASP, Air 2 Web develops and hosts weriess applications for corpo-rate customers. The Air 2Web software allows Web admiristrators to connect to Ar 2Web's application pietform to detion unious content for weeless devices. The software supports XML and can adapt a single Web site for use with different types of handhold devices

www.ibm.com IBM's WebSphere Everyplace Sette server software is NetMorf's strongest competitor it supports XML and prowides tools for designing and organiza Web content for WAP-enabled mobile ecas over the Internet and for conducting internet transactions on wire

It's Not Just a Dot.Com World

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TECHNOLOGY REGIONAL SCOPE



Detroit in High Gear

The city has revved up its campaign to attract new IT workers and help ease the staffing shortages in its many less-publicized industries. By Erik Sherman

pomer ir: When you hear the you hear the you hear the word Derroit, you think of three automobile companies, probably Motown and maybe crime. But this is an area on the rebound and an information technology job market that is excluding.

are tran a exposure.
Comerica Inc., a Detroitbased bank, says there has been SIB billion in new investment there since 1994, including investments in the headquarters of Compaware Corp. and General Motors Corp. In addition, Michigan has Isunched a 53 million advertising campaign

million advertising campaign to attract new workers.

"We are the only state to date that has moved its entire advertising budget away from business attraction to people attraction," says Doug Rothwell, president of the Michigan es in its many lessa. By Erik Sherman

This is an area with an IT

Thus to an area with an IT

There is an area with an IT

There

er oot already in this mar-

ket, what can you expect? We

asked some Detroit IT man-

seem to sesses the local oppor-

residue and offer advice that

Is Detroit an auto city? "Only

in the sense that the major

automotive honchos are based

out of this area and they pro-

vide a good living to the people

in this area," says Sharon Ball,

recruiting and administration

director at Comprehensive

Data Processing Inc. in South

The region is a major cen-

ter for the manufacturing of

paint, pharmaceutical equip-

ment, rubber products and gar-

den seed. Given the concentra-

tion of industry, it isn't surpris-

ing that banking, insurance and

Gold Mich

a relocator needs to know.

Corporate Landscape

Expanding business has means expanding IT employment, often offering the opportunity to use leading-edge tools. Yout because you produce a computer chip doesoft mean you're any more technologically sophisticated than someone who produces an appliance," says Rothwell.

On one hand, there is extended.

other financial industries also have a heavy presence. Sun

Oracle Corp. and Microsoft

systems Inc., Subase Inc.,

sive need for Web-based help, says Ball. "There's a lot of Java," she says, noting that companies are

says, noting that companies are looking for people who can do full lava programming and customization rather than use code-generating tools. There is also extensive demand for client/server application devel-

opment using Oracle, C or C++.

"We, in fact, when bringing our entry-level people in, have taken to training them on Cobol because they aren't getting it outside," says loan

McEachen, a technical recruiter at Comerica. Other skills in high demand are Active Server Pages. TCP/PL Windows NT, Windows 2000, Unix and SAP. Project and team leaders are also needed. Salaries won't be as high as those in Silicon Valley, Boston or New York. But given Deor New York. But given De-

troit's lower cost of living, they are good. Those jost graduating from college will fall in the \$35,000 to \$45,000 range. With two or three years of experience, that jumps to between \$60,000 and \$60,000. Extensive Unix programming, depending on experience, can bring more than \$100,000.

Managers with experience in e-commerce can fetch \$10,000 to \$155,000 plus bonuses, depending on the size of the company and the applicant's background. Per-capita income is slightly more than \$27,000 and the average household income

is just shy of \$59,000. The Rest of Your Life

Detroit isn't necessarily a place for those who shun crowds. The city proper has more than I million residents, with more than 4.3 million in the metropolitan area. However, those working there report relatively mild commutes, and the Metropolitan Detroit Convention and Visitors Bureau claims that the average commute is 23 minutes.

According to the group, winters get cold, with an average low of 16 degrees, but summers are more temperate, with an average high of 83 degrees The median housing value is just less than \$70,000, and the edian rent is \$376 per month There are plenty of major league sports, theaters and con certs, plus a 1,000-acre public area - Bell Isle Park - designed by Frederick Law Olmsted. The Great Lakes offer water sports, and a 45-minute ride gets you out of urban sprawl.

The Recruiter's View Detroit's FF market is tight

says Bill Krajewski, president of recruiting firm Kraec Co. in Troy, Mick. Even with the casy-to-fill jobe, it takes two to four weeks for employers to find a match. If a company seeks a specialized individual, the wait can run up to six months. "That individual has a big choice of who to work for at this point," says Krajewski.

As traditional companies try to break into digital business, workers with e-commerce and Internet backgrounds will find themselves in strong demand. Krajewski stresses that the area is generally conservative. One thing that hurts you lid if you've done a lot of job-hop-nine' he exer.

In addition to a college degree, vendor certifications from firms such as Microsoft and Cisco Systems Inc. are also

One approach a number of local companies, especially the larger ones, use is called "contract to hire." Rather than hire someone immediately, the company may look to bring a candi date into a temporary position and then evaluate him before making an offer Kraiewski says the trend among hospitals is toward outright outso Whether someone looks at outsourcing firms or directly to corporations, the future looks bright. "It's tremendous -- it's hard to find people now, and

it's going to be like that for quite a while," says Krajewski. I Sherman is a freelance writer in Marshfield, Mass.

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IT Careers in Texas

There's no place like Texas. It's a rich mix of tried and true tradition, where humble people close a deal with a handshake, and where the most advanced of technologies are born and bred.

The IT career market continues to expand, circling on key cities such as Austin, Dallas and Houston. But don't overlook the small metro areas, where new businesses are growing and technology is stretching to meet new demands and work in entirely new ways.

Cidra Corp. Houston, TX

Mix leading-adge technology with the oil industry, and there's bound to be a guster of opportunity. Critic Corp. In Texas designs and manufactures fiber-oils cassing systems for the oil and gas industry. The corporation's operations in Connecticut design and manufacture tunable devices and components for the selecommunications industry.

Founded in 1996, Cidra's optical-sensing technology is being put to work for customers such as BP Amoco. "Our fiber-optic sensing equipment has taken the place of the copper table that previously was snaked down during drilling," explains Kieren Portley, technical recruiter. "We capture the data to determine such factors as the old-to-water ratio and what's going on below the surface."

Poetiey is looking for iT professionals with experience in C, C++, DCom, MSC and date warehousing, Specifically, he will be hining a senior technical stem leader and a requirements test engineer. "Communication skills will be important bocause we are working with engineers who know down-hill drilling, We're helping them define requirements and applying technology to those requirements.

"Cidat is diveloping and menufacturing state-of-the- ant technology and products, so our employees have the opportunity to work with the listest software, systems and middlewars," Porting said. "Our company is employee owned – every amployee has stook options. As a result, throughout Cidar you led a strong seeme of passion and commitment for the technology we develop and the products we deliver our customers and patterns;

ThruPoint

Dallas, TX

ThruPoint, headquartered in NewYork and founded in 1996, now has offices to serve the Southwest in Dallas, Houston and Phoenix. The company provides advanced inter-networking solutions and services to help clients design, deploy and manage their computer networks.

"Our clients ere primerily large, global companies that are sophisticatod, early adopters of new technology and that view their networks as a critical part of their overall business strategy," explores sohn Troisty, regional recruiter. Both Morgan Stanley Dean Witter and Cisco Systems hold at stake in the company, which is in pre-PO operation, ThruPoint also bas officer is London Attracted and Frankley.

"By providing network engineers to our customers, we assist them with security audits, network design and Implementation of large network systems," says Trebisky. The company hires all engineers on a full time basis, and stook options are awarded as part of becoming an employee.

In addition to providing professional staff to Morgan Stariety, the company's Texas clients include Enron and Cisco. "Typically we do projects, working with the COL to resolve business problems, build prototype models and then build the network. We need people who have strong snafylicid stills, project management and communication skills.

"We're also looking for Cisco certifications, particularly the CDE," says Trebissly. "That's considered the doctorate in Cisco network technologies, and there are only about 4,000 such folks in the world. While we seek that level of expertise, we also hire people who may have some certification or once, but who are willing to work toward that goal."

Trebidly says ThurPoint does three things that attract angineers and leeps them with the firm. "We pay people well," he explains. "Our bese salary is in the 80th percentel or the market. We also offer year-and bonuses and discrizionary stock bonuses on the quarter, scoodly, we offer the opportunity for tensing. Eich engineer sits down on day one and completers a structured training plan. And lastly, we give ownership to propole who nock here." STATE AND THE SAME AND A STATE AND A STATE

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Two thirds of all companies do not understand the gap between technology and process.

Do you'll be difference between nacess and commodification lies with what happens after the click. Business means relationships, not just transitions. The new rore is shown profits, operations, and process excellence rather than a mad date to market capitation. Rose and McDonald have studied over 80 eCommerce projects and companies and they know how to gain the competitive deep. This book does more than set the scene, it goes into how you make the decisions required to gain an edge.



Value and Business Wealth
Hits Int I Int I Intil

Peter Keen advises leading-edge eCommerce companies. In addition, he has taught at Hervard, MIT, and Stanjard Universities. In 1994, he was profiled by Forbes magazine as "the consultant from Paradics." Mark McDonald is an associate partner and director of Anderson Consulting's Center for Process Euclêmen.

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Analysts: Web Ad Revenues to Improve

Declines attributed

to fizzling dot-coms

wy 1000 h. wersa tough lately for firms earning key revouses through online advertising, but if they can weather the recording to analysts. Since the spring, when the stock masket endured a jur-

stock market endured a jarring correction, three key online industry players — Yahoo Inc. [Nasdaq:YHOO], DoubleClick Inc. [Nasdaq:DCLK] and Engage Inc. [Nasdaq:ENGA] — have seen their stocks fall as ad reveoues have plansmeted.



Yalloo in Santa Clare, Califf, saw its stock fall from a high of 200 314 points per share on March 27 to 207 on Sept. 2 points per share on March 27 to 207 on Sept. 2 share price fall from a high of 107 540 to March 10 to 27 12/16 on Sept. 12, while Engage in Andorsee, Mass., deopped from a high of 22 12/2 on March 10 to 21 12/16 on Sept. 12, while Fallogs in Andrews, Mass., deopped from a high of 22/2 on March 10 to 21/16 to 100 12/16 to 21/2/16 on March 10 to 21/16 to 100 12/16 to 21/16 to 2

do with other issues such as privacy concerns.

Rich Petersen, an analyst at Credit Soisse First Bostoo in New York, says he agrees, adding that the failure of many dot-out has burt online and revenues at the companies have dropped out of the picture.

But as new dot-coms and many tradi-

tional retailers new to the Internet begin to come forward, offine advertising will again pick up its growth reach the says. Mark Mahaney, an analyst at Moogan Stanley Dean Witter & Co. [NYSE-MWD] in New York, says he expects improved online ad reventure by each next year as a larger pool of traditional

retailers joins the first taking up the dack from failed doe-come. But Jack Statis, chief economist at Zona Research Inc. in Redwood City. Callf. says that while failed doe-come have led to much of the recent advertising downmant, the privacy issue its one to watch. The concerns he says, is from consumers who are levery about sharing personally identifiable information when clicking on ads.

"They're atraid that something is going to happen with the information." Stafs says. "More often than not, when you click on these things, they ask for information."

CEY (BD) New annual high nuched in period (BD) New annual low tracked in period oppyright CNFT inventor, Budder, Collamora, Senson Phin information in used on period resease? This information is used on period believed to be reliable, and hough commune certifiest are made to annue in occuracy, no generateses on he made. OMET resource and Computerworld assistence to liability in interestation on CNFTs in time currantees. For information on CNFTs in the currantees of the CNFTs in the currantees of the CNFTs.

How to Contact Computerworld



Continued from page 1

Microsoft Corp. has promised not to provide any personal information to third parties unless the customer has specifically giveo Expedia permission to do so. Beyond that, as of today, customers have access to their profiles and the ability to update, correct or remove any

items at any time. "As a business we need that personal information to process pedia's marketing manager. Yet we want [customers] to feel confident in giving us that information, and we want them to understand exactly how we will

use that information." LeVine said possible onlin privacy legislation by the federal government spurred the company into adopting the new policy.

Expedia hired PricewaterhouseCoopers to audit its han-dline of personal information

Continued from page I

of Omaha, it's a bottom-line is-

sue. Privacy "is something that

is going to help build a trusting

that we hope will allow us to retain their business and acquire new business," said Hoffman.

There are no more than 50 to

75 chief privacy officers (CPO)

working at firms today, said

Alan Westin, publisher of the

Hackensack, N.I.-based journal

Privacy & American Rusiness. who spoke at the Global Priva-

CPOs work with a variety of

business units, including infor-

mation systems, legal, govern-

mental affairs and training de-

cy Summit here last week.

edge "said Westin.

ionship with our customers

rest. For Mutual

CPOs

ised regular reviews by the New York-based auditing firm to guarantee that the Web site is processing information in a proper fashion.

The online travel agency hopes that scrupulous handling of personal information will pay off the way improvements in credit-card security did three years ago

"Hopefully, it'll be that underlying sense of confidence that allows [consumers] to make that transaction," LeVine said

Policies Still Vary

Not all Internet companies are enacting such policies. Amazon.com Inc. in Seattle. for example, recently took the opposite stance, telling customers it could no longer guarantee that it wouldn't share its

customers' information. In response, some partners are severing ties to the retailer (see story at right) But Expedia joins online

search-engine provider Alta-Vista Co. in Palo Alto, Calif. as prior to today's switchover and a leader in the privacy arens, tant thing they need is buy-

in from toe management, said Tatiana Gau, vice president of integrity assurance at America Online Inc. in Dulles, Va. There is no question in my and that one of the most important role of the CPO is to ensure that the whole compa-

ny is adhering to a privacy commitment," Gau said. Hoffman's post at Mutual of Omaha was created in April

Emergence Of the CPO Chief privacy officers are

increasing in number and But the number of privacy prominence at corporations What do CPOs need? Top manageme support and the ability to interact with a variety of business units, including inforofficers is going to increase, perhaps into the thousands, as companies find "that their ability to manage privacy is a maior part of their competitive

What do they want? To fix a company's What do they fear? Literion rouling

partments. But the most im-

AT A GLANCE Expedia Takes Privacy Oath

Expedia today is debuting o privacy policy that will cover all past and future customers of the travel Web site. Key elements of the policy include the

· A promise and to said or sent any personal eformation to a third party without the curtomer's permission The ability of continues to access and re-

ves the personal information they've pro-vided to Excendia. · A quarantee that promotorul e-mails will not be sent unless the customer wounds An assurance that third parties that at vertox on the Expedia site can't gain our

said Ari Schwartz, a policy analyst at the Center for Dem racy and Technology in Wash-

"This is a major company

information technology map agers to document all of the company's data flows in order to learn exactly what happens to that data and who has ac-

"We really didn't have a good handle on information flows through the company," said Hoffman, noting that the current project should lead to better risk-and-security assessments and help the company develop its privacy policies.

Some privacy advocates have argued that corporations will have an easier job of managing privacy if the government sets baseline regulatory standards And although there are target ed medical and financial regulations, there isn't any broadbased privacy legislation for merce

But Jules Polometsky, CPO at network advertiser Dou Click Inc. in New York, said he hopes lawmakers give self-reg-ulation more time. Let's give the majority of bonest busisecond-most-common nesses an opportunity to see if that works," he said. cera behind credit-card security, Kim said.

taking this step." Schwartz said. "It says the market for privacy is coming together." Schwartz's group is hoping that self-regulation in the business community will comple-ment federal privacy guide-

lines and new technologies that give consumers more con trol over their personal infor-

Some Finding a Niche Russ Sapienza, a partner in

the communications, entertrimment and media penetics at PricewaterhouseCoopers, said that in the past four years, bis firm has been able to build an entire practice around privacy issues. He warned those companies looking to build such policies that it takes more than just composing an impressive policy statement.

Sapienza's group checks how data files are controlled how well software is installed and whether customer service employees adhere to the policy. He stressed that an ef-

fective policy needs to trickle down intact from the executive suite to a company's phone

companies where they don't have a policy because they don't want to be subject to critione if they don't live up to that policy," Sapienza said. According to Heidi Kim, an analyst at Jupiter Communications Inc. in New York, Expe-

dia's policy sets a new bar for the online travel market. The firm is taking laudable steps toward minimizing the amount of personal information it needs to process its transactions, she said.

Kim called the move 's very good strategy, from a business standpoint," noting that online travel providers constantly compete on price but that few have made headway in addressing privacy as a customer

Research conducted by Jupiter shows that 58% of online consumers want promise that their information won't he shared with third parties, making it the con-

Amazon Loses 2 Partners Over Privacy Policy

mation Center (EPIC) in W. m Brook N.J. have so e retailer's privacy policy: Dn Sept. 1, Septile-box

FRANK HAVES/FRANKLY SPEAKING

No right answers

AST MONTH, IT WAS KAISER PERMANENTE. This month, WesternUnion.com had to scramble after an IT shop mistake left thousands of customer names, addresses and credit-card numbers open to a cracker's attack (see story, page 16). More than 15,000 names had been stolen, but Western Union's people didn't know that when the break-in was discovered early the morning of Friday, Sept. 8. All they knew was that their site had been cracked.

So at 9 a.m. that day, the company assembled a "virtual war room" - a phone conference that included Western Union's president,

IT has to

take respon-

sibility —

and the lead

- to fix the

problem.

the top legal beagles for both Western Union and its parent company, First Data Corp., and IT

people from both organizations. They all banged heads for a while and then decided to start contacting customers. (You have the clont to make that kind of decision when the business unit's president and lawyers are involved.) That started on Saturday: By phone, e-mail and letter, customers who had used the Web site to wire money were notified that their informa-

tion might have been comproised, and they were told to contact their financial institutions. By Saturday afternoon, Western Union had a toll-free number mers to call with questions. By midday Sunday, IT staffers knew the extent of the breach - exactly which 15,700 mers' information had been stolen - and sent that informa-

tion to the credit-card companies. Which promptly told Western Union to stop contacting the customers — they wanted to do it

themselves. That sounds like a slap in the face to Western Union's best efforts to protect its customers. doesn't it? But it's not. And it underscores a paradox in recovering from this kind of Web catastrophe: IT has to take responsibility -

and the lead - in fixing the problem. But sometimes, other parties are better positioned, better equipped and actually want to do the work. And when that's the case, the best plan is to just get out of their way and let them work

Once they have the stolen numbers in hand, Visa, MasterCard and the other credit-card nies are able to do more than simply contact the affected customers. They can use sophisticated techniques to spot likely fraudulent card uses. Credit-card company staffers are

also exactly the right people to advise cardholders and cancel cards when necessar That's the business they're in. And since they wanted to take on that part of the clean-up job, letting them do it was exactly the right move for Western Deion

On the other hand, until the credit-card cor panies were ready to take that on, Western Union was exactly right to notify

customers on its own. Messy, isn't it? And there's no right answer, no industry-standand best practice for straightening out this kind of foul-up. Plans, even good plans, may have to change fast. Business partners

may force changes, or lawyers, or corporate policy makers, or even customers - all people IT has no control over. In IT, we like solid plans, clear lines of responsibility and pre-

dictable results. But in a disaster like this, we're not going to get them. We'll more likely be whipsawed all over the map, even if we have the full support of the top brass, as Western Union's IT

people did. But elegance doesn't count when you're rushing to protect customers, satisfy business partners and repair damage. Results do. By Wednesday afternoon. WesternUnion.com's Web site was back up. The security holes

were closed And out of all the numbers stolen from the Western Unio site, not a single fraudulent credit-card transaction had been reported.

Hayes, Computerworld's senior news columnist, has covered IT for more than 20 years. Contact him at frank_hayes@computerworld.com.

SHARK TANK

BIG OUTSOURCER handes the installation of an unique the power supply for a local government agency's servers. When the batteries get too low on the new UPS, a signal will go to the servers to shut them down Just one problem, notes the network admin pilot lish who inspects the work: "They didn't hook up the cables, so the servers will prover receive the sinnal to shut down!

PRICEY CONTRACT program mer calls on-staff plot fish to complain that a program "just gut working," and after four flours of debugging, he still can't figure out why "Did you make any changes to the program? asks the fish. Pricay programme recites. "Nes, but only to one line

EDICT COMES DOWN from the owner of a wholesale distrib utor to put a photo of every em-ployee on a "People" page of the company Web site, Webmaster of lish snaps the pix, scrupu lously informing each staffer that the photo is for the Web. The driver storms in: "Is my picture on the internet? That's an invo sion of my privacy and you have to take it off right now!" OK, OK,

says the fish, but I told you it was for our Web sets, nght? "Yeah, he says, "but I didn't know it was going to be on the internet!

IT STAFF CAREFULLY completes all the boss's changes to a 35-page outsourcing agreehard copy for sagnetures and e-maris a copy to the boss - who then spends a full day with the fish's entire team, carefully comname the fish's postouts with what came from his own confer sed in case it somehow oroduced a different document."

Last week's nam about the com-

pany lishing for a Latin American marketing guru in Brazil netted lots of mad informing Sharky that in Brazil they don't speak Span ish, they speak Portuguese." Actually, there are plenty of Span ish-speakers in Biszii - and plenty of people down south who don't speak Spanish, As one inthe know reader put it. "We prot by much mousin at least two languages for our roses any South America." Lay some laniges for our folks anywhere in guage on me. sharky@ computerworld.com, You o a sharp Shark T-shirt if your story sees print - or turns up in the daily leed on the Web at

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